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Practical Bee-culture.

RAISING LARGE RESERVE QUEENS.

In the "*Honigbiene von Brün*," the Rev. L. Morbitzer, of Raubaniien, gives his method of raising reserve queens; in nucleus hives. It is an article prepared with care, showing that its author, besides being a skilful manipulator, is guided in his operations by a clear judgment and sound reason. The importance of having reserve fertile queens constantly at hand for any emergency, is so obvious, that it need not here be enforced, and we proceed at once to the description given of his queen-raising nucleus hives. These are small, being five inches wide, seven inches deep—adapted for four small combs, and ten inches and a quarter high, arranged for two tiers of frames. The dimensions of these nucleus hives may be modified, to correspond with the requirements of the frames in use in any apiary where the system of keeping on hand a supply of reserve queens is adopted.

When and how are these nucleus hives to be used? Mr. Morbitzer advises that queen-raising in nuclei should not be engaged in prematurely in spring, but that it be deferred till drones are hatched and the weather permits them to fly. Beginners are usually too impatient in this matter, unable to brook delay, and thus committing a gross error at the outset:—better wait till the season and circumstances conspire to favor the design. For every ten strong populous colonies in his apiary, he prepares two, three, or four nuclei, but in no case more than four. To this end he removes the queen of a populous stock, usually selecting an old one that should be superseded in the course of the ensuing summer. With the aid of this queen he forms an artificial colony in one of the nucleus hives, placing it in his cellar over night, and setting it next day in some convenient place in his garden, keeping the queen caged temporarily. In the unqueened colony he inserts combs with eggs and brood from such of his colonies as he desires to raise queens from, trimming off the lower edges of the combs, and setting them in the middle of the brood chamber. The colony is then regularly fed every day, with lukewarm honey, that the brood may be properly attended

to and become fully developed; and that the embryo queens also be fully developed, the bees must be allowed to fly, to procure the needed supplies of pollen and water.

Eight or ten days later, the additional nucleus colonies are to be formed. With this view small sectional frames containing worker combs had been inserted in the brood chamber of populous stocks, and are now taken out to supply the frames of the small nucleus hives, into which empty combs and combs containing sealed honey are likewise introduced. To procure a supply of *young workers* for these nuclei, the bees clustered on the brood combs of full colonies are brushed off into a transferring hive or any empty box, which is left open. The older bees will speedily return to the colonies from which they were taken, while the young ones will remain and are used to supply the nuclei, which are then placed in a cellar over night, to settle and become reconciled to their changed condition. Next day a sealed queen cell, taken from the unqueened colony, is inserted in each nucleus, and these are replaced in the cellar, where they remain four or five days longer, or until the young queens are hatched. They are then taken out and set apart from other hives in the apiary, if possible on the south or southeast side. When the young queens have been fertilized and disposed of, it is advantageous to replace them with sealed queen cells built for second swarms, instead of using post-constructed cells, for the latter do not produce as vigorous and perfect queens as the former.

In addition to the above, the Rev. Mr. Stahala, of Dolein, has the following remarks, in the same journal, on the process for *rearing large queen bees*: "All experienced beekeepers concur in the conviction that large queens are preferable to small ones. Though occasionally even quite diminutive queens prove to be remarkably prolific, this is nevertheless the exception and does not invalidate the rule. Every breeder should, therefore, constantly endeavor to raise large queens—the larger the better. Such are not only more prolific, but become fertilized earlier, and are less liable to be lost on their excursions."

Mr. Morbitzer cautions breeders against using *post-constructed* queen cells for queen raising. Mr. Stahala, however, dissents from this, and

prefers such cells precisely, because from them he obtains the largest queens. "In many cases," says he, "the queen cells built in a hive that has sent out a swarm, are post-constructed—that is, they were started after the swarm had left. Still, among them some very large ones may be found. And according to my experience, queen cells built in or on old combs are invariably smaller than such as are built in new combs. Hence most large cells are found on or near the lower edge of newly built combs; and when it is desired to obtain particularly large and fine cells, I unqueen a colony whose queen for other reasons I may intend to remove, and supply the colony, the day after it has shown consciousness of being queenless, with a frame containing newly built comb stored with eggs laid by a queen from which I wish to breed, the brood and eggs derived from the removed queen, with any royal cells that may have been started, are transferred to other colonies, containing the bees to start queen cells on the new combs given to them."

Mr. Stahala adds—"If from a worker larva a large queen is to be produced, she must not only be reared in a capacious cell, but also be supplied with better and more abundant food, during the entire period she continues in her larval state." This, he says, is best attained by having eggs laid in newly built worker comb. And should it happen that the lower ranges of cells in such combs contain no eggs, they are to be pruned off before inserting the comb. Large queen cells thus obtained are to be transferred to their destined nuclei on the ninth or tenth day, and large and fully developed queens will almost invariably emerge from them. These nuclei, however, must always be so well stocked with bees that the queen cells are kept constantly covered and warm. It is therefore well not to have any unsealed brood in them, as that might induce the bees to fly out in large numbers. It is also well to limit the brooding space as much as possible, so as to confine the heat. Should the season be so advanced that the bees have ceased building comb, insert a frame furnished with mere strips of guide comb in the brood nest of a populous colony, and the bees anxious to close the vacancy will speedily build comb there, if well fed; and the queen will promptly supply the cells with eggs. This may then be transferred to the queen-breeding stock or nucleus, the bees of which may be forced to build queen cells upon it, by removing all other brood combs immediately.

[For the American Bee Journal.]

Novice.

DEAR JOURNAL:—This article will be necessarily brief, on account of ill health. Receiving a peremptory order from our physician to be out of doors as much as possible, we construed it as a providential interposition to turn our attention to our basswood orchard project, and have got it so far under way as to have purchased 10½ acres of land for the purpose.

We propose to first thoroughly underdrain it, four feet deep, and then raise the plants from the seed, in hills twelve feet apart. As fast as they get crowded they are to be thinned out. We are collecting all the information we can, as to their cultivation, and would be very thankful for any fact on the subject. If we should not live to see them bloom, some other beekeeper may. Partial paralysis of our right side prevents our hitherto faithful right hand from saying more at present. With kind wishes to all, we remain, as ever, yours,
NOVICE.

[For the American Bee Journal.]

Novice.

Now this is coming a rather sharp dodge to get one of my articles read—I mean heading it *Novice*, for of course every one will at least commence to read it, thinking by the heading that Novice wrote it himself.

But I am satisfied that some of the later subscribers of the Journal would like to know something about Novice, more than they do; and as I had the pleasure of making him a visit last summer, I will say may say about him.

His name is A. I. Root, and not A. J. Root, as it is often printed, and the worst thing about his moral character is that Medina, Ohio, where he lives, is accessible only by stage. He is a jeweller by profession, of about thirty-five years of age I should judge; though as I am not good at guessing, I may be five years wide of the mark; married of course; rather under medium size; trim built; of sandy complexion; very neat in appearance, and I should judge neat about everything he does. One would suppose, from his free and easy manner of writing, that he is a talkative person; but I am inclined to think he is rather reticent, except when his favorite topic—bee-culture—comes up. (Please bear in mind that I only saw him one day, and that I have never seen or heard a word from him, before or since, except what is printed in the Bee Journal.)

The reader of the Bee Journal need not be told that, in everything pertaining to the bee, he is an enthusiast, perhaps over sanguine, yet withal so modest and unassuming in putting forth his ideas, that it is a real pleasure to hear him talk. It is to be hoped that he will make enough failures, or have enough Christian grace given him, to keep him from becoming an egotist.

His apiary presents a very neat appearance. Internally his hives were not made as true as they might have been. In one hive he had a lot of pieces of comb arranged in a frame, laid on a board, and left on the top of a hive, for the bees to fasten together. I have since tried the same thing, only I put paper on the board before putting on the comb, as I find it easier to separate the comb from the paper than from a board.

His hives were placed on separate bottom boards or stands, and a numbered brass check, such as jewellers use on watches, placed on each hive, and a duplicate check on each stand. This was done to number the hives, and to allow the hives when set out in the spring, to occupy the

same stands they occupied the previous year. This must be a decided advantage over having the hives numbered in the ordinary way, as one changes often (at least in the spring, with the Langstroth hives) a colony entire from one hive to another, and then, if the number on the hive cannot be changed, it makes trouble with the record.

At the time of my visit he was experimenting in the direction of comb-making. Whether he has made a success of it, or whether the patent of Mr. Wagner covers the whole ground, the Bee Journal does not say. I had much hoped that before this time we could buy comb foundations. When can we have them? If they can be sold as low as has been hinted, I want five hundred of them.

Novice's queen nurseries I have tried, and have failed with them—the bees gnawing them out of the comb. Perhaps I put them in in a blundering way. I have tried his cloth covers or quilts, instead of honey boards, and so far am highly pleased with them. I have used newspapers in them instead of cotton batting, and it answers a very good purpose. I think very few would use wooden honey boards after trying the cloth ones. That one item I consider of more value than a year's subscription to the Journal.

B. LUNDERER.

[For the American Bee Journal.]

A Visit to Mr. Alley.

Having business in Boston during the month of August, I was glad of the opportunity of visiting the apiary of Mr. Alley, in Wenham. I have generally found that the true lover of his bees is an accessible, genial kind of person. I was sure of a welcome from my friend though a stranger, and was not disappointed. A short half mile from the station, the long array of hives scattered through an orchard of pear trees laden with delicious fruit at once pointed out to me the residence of Mr. Alley, and a cordial reception from his wife soon made me feel at home.

Mr. Alley was absent, and waiting his return, I strolled among the hives.

Two hundred hives in full working order is a sight to gladden the heart of an apiarian at any time; but here, where all were Italians, the sight of the golden rings of the bees gleaming in the sun, was a pleasure indeed.

Mr. Alley soon returned with a wagon load of hives well filled with (common) bees; and after a cordial invitation to dinner, enlivened by a most interesting and instructive "bee talk," I had the pleasure of seeing thousands of bees handled in a way which would astonish some of our friends, who are so ready to run at the buzz of one.

As it may interest some of the readers of the Journal, I will give a brief account of the way in which nucleus colonies are made.

Carefully raising the top of a hive, a good whiff of smoke (his fumigator, by the way, is the best I have ever seen) is blown in, and after a short pause, comb after comb is lifted or cut-out and the bees brushed off with a light whisk

broom into an empty box, the bees clustering together in the most amiable quiet manner. In this instance the bees from eight or ten nucleus hives who had fulfilled their mission, were also brushed in, making one united family. I thought, as I sat by, if discordant human creatures, who oftentimes have so much venom, could thus be shaken up together, and made to be of one mind, what a good thing it would be.

The queen was of course destroyed. And now, with a long-handled dipper, the bees, like so many berries, were measured out into the small hives until all were disposed of; the hives, one by one, set aside, each with its combs, to be ready in three days to receive its comb of Italian eggs.

I saw the mothers of these eggs, and there was no room for doubt as to their beauty and size—the handsomest queens I ever looked upon. If an exception could be made it was the directly imported ones; but only the keen eye of Mr. Alley would find a blemish—if blemish there was.

Of Mr. Alley's hive I can only say that, after seeing one taken apart,—full of bees—the ease with which it was done, and the regularity of the combs, it seemed to deserve all the praise it has received. Certainly the ready access to the main hive, in the full working season, is a great desideratum; and if side working boxes are as successful as supers, or boxes on top, then there is nothing more to be wished for.

For wintering, the hive has important desirable features, viz.: the power of concentration and protection (with the side boxes) from extremes of heat and cold.

After such a bee-lesson, I returned to Boston with a most pleasant recollection of my day's experience.

It seems to be a favorite expression with some of the correspondents of the Journal, that they have "no axe to grind." I certainly have none, and do not care to grind any body else's axe; but I do hope that such a good friend of the Journal, and such a good apiarian, may have (which has not always been the case) a fair trial and ample justice.

D. C. MILLETT.

Holmesburg, Pa.

[For the American Bee Journal.]

Mr. Alley a Fair Dealer.

DEAR JOURNAL:—If I knew half as much about bees, as some who write for your columns think they do, I would have written you a letter long since. But, having a wonderful stock of modesty, and not knowing anything strange or interesting to tell, I have kept still. I would not have spoken even now, had it not been that I think Dr. C. N. Austin puts the case rather hard against Mr. Alley. I have had some dealings with Mr. Alley, and have found him a perfect gentleman. I am not sure that there are many other queen raisers quite as honorable. Last summer I sent to him for a couple of queens. He answered that he had so many orders to fill, that he was afraid that it would be too late before he could supply me. I insisted that he

should send them on if possible. Well, on the last day of September the queens arrived. It had been very cold for a week, and the poor things were about chilled to death. I did the best I could for them; but by the second morning they were dead. I informed Mr. Alley of the result, and he said at once that he would send me others this summer. He has done so, and I do not think there are any finer queens in this State. They are just regular beauties.

It was no fault of Mr. Alley that the weather was so cold, and the price at which he sells his queens is so low, that a man must be very conscientious in his dealings, who would do as Mr. Alley has done with me.—And, by the way several of your correspondents are afraid of being ruined by Mr. "Alley's cheap labor." Let me tell them that I have an Italian queen for which I paid eight dollars, and I would not give one of the two Mr. Alley sent me, for four like her.

This is the way I introduced my queens. I took three frames of brood out of a populous colony; put them into an empty hive, with the Italian queen caged; filled up the hive with other frames (empty); removed the old colony and put the Italian in its place, and in forty-eight hours released the queen. I find the plan a good one, and do not care whether it is according to the books or not.

With this, find two dollars, which place to my credit, and believe me a constant reader.

JOHN S. MCKIERNAN.

Smith's Mills, Pa., Aug. 19, 1871.

[For the American Bee Journal.]

A Merited Tribute.

MR. EDITOR:—I wish to state a few candid facts, although it may savor of having an axe to grind, but I assure you I have none. From pure motives, I wish to state for the benefit of my fellow beekeepers over our broad land, I must say that I have been receiving Italian queens from a good many of our leading breeders, almost ever since they have first been imported into this country; but none of them compare with the two which I received from Mr. Adam Grimm, of Jefferson, Wisconsin. The queens themselves are beautiful, and their worker progeny exceed any I ever saw—every worker being bright and plainly showing the three yellow bands.

Mr. Grimm ought to know the pure stock, as he has been himself to the home of the Italian bee in Italy, where they are found in their purity. Besides, I venture to say that he has more bees on hand than any man on this continent, and all of them are the pure Italian stock.

Elmira, N. Y.

H. M. M.

It would almost seem as if the Italian bees were common, or at least well known, in England nearly three hundred years ago, for "rare Ben" Jonson, who flourished in Queen Elizabeth's days, says—

"The yellow bees the air with murmurs fill."

[For the American Bee Journal.]

Amateur No. 3.

DEAR JOURNAL:—I was so low-spirited when I received the August number of the Journal, that I could not write a line. My bees did not gather much honey from the white clover, and since that time they have done nothing. Even now (Sept. 2), they have not more than two and a half pounds of honey to the hive; and still the weather is so dry that I am afraid they will not make a support for the winter. Yet I live in hopes, and notwithstanding all opposition, I still have the same love for the little pets, and will watch them carefully.

I have just introduced a queen which I received from Italy, and she is doing well. I would here say that a great deal more care is required in introducing queens brought from a distance than those reared in your own apiary. There seems to be something about them when received from the shipping box that the bees do not like; wherefore I always close them in a cage securely, and place them between two frames of honey, near the center of the hive, and let them remain there three or four days without interruption. Then smoke the bees, so that they will fill themselves full of honey, and smear the queen with honey, when she will be received all right. Care must be taken to destroy all queen cells, if any are started. I have never lost a queen, when managed in this way; whereas I lost several by putting them in a wire cage stopped with wax, leaving the bees to remove it themselves. Although I have never lost a queen from my own apiary by introducing in this latter way; yet I would say to those receiving queens from a distance, be more careful in introducing them.

I have been reading with interest the discussion going on in various quarters about the famous Dzierzon theory on the purity of drones from mothers impregnated by black drones. I think this question involves a great interest of bee-keepers, and should be carefully sifted. As to myself, I have long believed it false, and do not hesitate to tell my brethren of it. I have had some considerable experience in this matter, and base my opinion on my own experiments, and not on what I read.

If I could be as successful in artificial fertilization as some, I have not a doubt that I could prove beyond question that a queen raised from a pure mother, but mated with a black drone, would not produce pure drones. My neighbors who keep none but black bees have on several occasions had queens fertilized by Italian drones and the marks could be traced through the drones as well as the workers. I hope further and more satisfactory experiments will be made on this subject.

In this question, the question of the Italian bee, as a distinct variety, may play a conspicuous part, and will have to be settled first. On this I am quiet for the present, at least. I am satisfied with the superiority of the Italian as it is, whether a distinct variety or not. I believe a cross with the black bees does not

injure the quality of the workers, as they will gather as much honey, are quite as watchful, and withal as desirable to the beekeeper.

Hoping that others have had better success than I have had this season, and wishing the Journal prosperity, I remain an

AMATEUR.

Sept. 2, 1871.

Of course there can be no objection to experiments made to test the truth of the Dzierzon theory, though a knowledge of what *has* been done would much facilitate the progress and save trouble and useless labor in that direction. Those who make such experiments should take special care, also, that the queens they select to start with are of undoubted purity, if they would hope to reach conclusive results.

The deceptive appearances in apiaries of common bees that have led observers astray, it should be borne in mind, did not present themselves till after the second season subsequent to the introduction of Italian bees in the vicinity of such apiaries—which fact divests the phenomena of their supposed significance. In a few years after that event, very few pure common queens will be found within a radius of five or six miles from an Italian stock, and observations made in such neighborhoods or under such circumstances, are exceedingly fallacious.

Experiments instituted with either common or Italian queens of unquestionable purity, we are well assured, will always result in confirming Dzierzon's theory: and the sooner they are made, and the more frequently repeated, with due and indispensable precautions, the sooner will all doubts be removed from the minds of candid inquirers.—[Ed.]

[For the American Bee Journal.]

The "Coming Bee."

MR. EDITOR.—It is long since I contributed anything to the Journal, and doubtless a much longer time might have elapsed ere I would have trespassed on your indulgence, but for the fact that I wish to call the attention of beekeepers to the subject which heads this article.

Since the introduction of the Italian bee in our country in 1860, it has been held up to beekeepers throughout the land as what Dzierzon calls it, the "*ne plus ultra of bees*." This flaming endorsement was doubtless merited at the time of its introduction; but it now has a rival in the field, which, in my opinion, is destined soon to force our striped beauties to a secondary position. The bee I refer to is a *cross* between the Italian and the black bee, favoring the latter in general appearance more than the Italians.

The queens of these bees are not as dark as those of the *pure blacks*, but are *longer* and *larger* than those of either of the pure races, very active, inclined to hide, wonderfully prolific, driving the workers out of the "brood chamber" into the surplus receptacles, whether *boxes* or "store combs;" and not, as is too often the case with the Italians, allowing the workers to fill the brood combs with honey.

The bees of this kind are very docile, easily handled, and readily shaken from the combs. Their wings are large, and their range of flight and acuteness of scent greatly superior to those of the Italians. Their bodies, when young, have a gray and hairy appearance all over. The wings on the abdomen are well defined, very light-colored, but not quite as light as those of the Italians. Although it is difficult at present to describe these bees, yet by one familiar with them, they are easily recognized.

What their looks and appearance will be when they are worked into a distinct breed, it is difficult to conjecture. But a *mixed race* or *cross* between the native and the Italian, is what we want. We want a bee not for *show*, but for honey gathering; and that such is to become the favorite with beekeepers, I am fully persuaded.

The advantages of these bees are, first, their prolificness; second, their disposition to *store honey* in boxes or in any place accessible; fourth, their being less disposed to swarm than the Italians or blacks, and they are more easily managed as *non-swarmers*; fifth, when they do swarm, whether as prime or after-swarms, the swarms are *invariably* large, as might be expected from their prolific queens and disinclination to swarm; sixth, they are easily handled, and very readily drop from the combs when shaken; seventh, their range of flight and acuteness of scent, are greater than those of either the Italians or blacks; eighth, they are more disposed to build *worker* combs than the Italians.

I wish friend Grimm, instead of banishing the black bee out of his neighborhood, had experimented upon crosses a little further than *half-breeds*. It is not my intention to say aught against the Italians, notwithstanding they have their faults, but simply to call the attention of beekeepers to the advantage of carrying the crossing process beyond the cross half-breed. The "coming bee" will, in my opinion, be very closely related to the *common black bee*, but with enough of *Italian blood* in it to form a *distinct* breed.

Let those who have black bees, procure *Italians* as quickly as possible, and they will soon see the advantage of a *mixed race*; and after the first cross there will be no more trouble about handling. I hope that those who have had experience with the kind of bees I have written about, will tell "their experience" to the members of the beekeeping fraternity, for I suppose that others, besides myself, have noted the great advantage of these bees. The few that I have had for the past two years have stored *nearly double* the quantity of honey stored by *my Italians*; and are not nearly so troublesome to handle, for they *run* from *smoke* quicker, and are shaken from the combs very easily.

G. A. WRIGHT.

Orchard, Iowa, Aug. 14, 1871.

We suspect that the "coming bee" is still further in the distant future than our correspondent imagines. The second, third, fourth, or even the fifth generation of cross-bred bees, taken as they run or fly, is not likely to have a fixed character, transmissible with certainty

in subsequent breeding, if we may trust our own observations; and till such point is reached, it cannot be said that the product possesses any character at all. We have frequently seen the third and fourth generation of cross bred bees, on both sides of the family, and could not perceive that there was yet any "fixity" about them, except that all of them had, invariably, like their remotest ancestry, four wings and six feet. The first cross, however, always proved *true to name*, for *cross* they ever were, through all the moods and tenses. In subsequent crosses this bad trait was perhaps less prominent, but neither was there any indication of a tendency to permanent improvement. Further than the fourth or fifth generation we have no experience to speak of, nor do we think we shall have shortly, as we mean to cut off the whole tribe, "without remainder," next season, by dethroning the queens and substituting pure Italians in their stead—for, as at present advised, we shall candidly say those are good enough for us.

But we do not wish to be understood as denying the possibility of originating and establishing a superior breed of bees. Far from it. On the contrary we believe it is practicable and will be done, though not lightly nor speedily. When the principles of scientific breeding shall have been investigated and ascertained in regard to bees, as they have been in regard to other domestic animals, and means devised for carrying on the process with precision and certainty, as a definite branch of business, the way will be open for improvement in this direction, and persons will be found to devote to it the requisite time, attention and skill. Then, and not till then, may the "coming bee" that will *stay*, be looked for with some confidence.

Captain Baldenstein, who introduced the Italian bee in Switzerland long before it attracted the notice of German apiarians, had during eight or ten years, only one stock of the pure race, with a number of hybrid colonies of various degrees of intermixture; but he does not appear to have observed among the latter, at any time, any that were superior or even equal as honey storers to the original, pure Italians. As a genial bee-keeper and close observer, he may be regarded as a trustworthy reporter of what was seen when the first cross-bred bees presented themselves outside of Italian territory. Casual mixture, or loosely managed cross-breeding, has not yet led to any encouraging results. More is to be hoped from systematic methods, when we get into position to adopt and prosecute them; though it will never do to proceed on the Darwinian theory of breeding men from monkeys, for that, according to the great dramatist, precisely reverses the natural course, as he told us, hundreds of years ago, that

—"The strain of man's bred out
Into baboon and monkey;"

and we feel pretty sure that if facts be appealed to in demonstration of theory, the poet would distance the philosopher.—[Ed.]

[For the American Bee Journal.]

An Hour Among the Bees.

MR. EDITOR:—Before I give you an account of a most interesting hour I lately had among my bees, permit me to return my thanks to yourself, Mr. Editor, and Mr. J. M. Marvin, for the proposed solutions of my problem; though I am not yet perfectly satisfied with the explanations given. The event occurred on the 25th of July. The queen was not old, but vigorous. There was neither a young queen nor a queen cell in the hive; the frame, with queen, was not more than a minute out of the hive, nor were there any robbers present.

I could yield to Mr. Marvin's solution, if I could see how any poison could touch the queen before she was first attacked, which was evidently with deadly design. The bees were in no-wise irritated previously. I can easily account for poison getting to the queen after the battle commenced. But I am not sorry for sending my problem to the Bee Journal, as it has been the means of giving an important fact, which but few know, to the public:—I mean, that if a queen be touched with poison from a worker bee, it produces paricides. For this, we must thank J. M. Marvin.

On an afternoon last July, I visited a populous hive to which, a week previous, I gave a fine large queen cell. From my Journal I ascertained that the egg around which the cell was formed, must have been laid at least seventeen days before. On opening the hive, I expected to meet a nice young Italian queen two or three days old, but to my disappointment, the cell was just as I left it, unhatched. Of course I concluded that its occupant was dead. So with my penknife I removed the top of the cell, and behold! a worker issued, or a bee even less in size than a worker. It could run quite smartly among the rest of the bees, though it would have required a day or two more to hatch it. In case the little thing should give me some future trouble, I at once carried it to a queenless miniature hive, and placed it on one of its central combs; but not being fully matured, it was soon dragged out through the entrance as a worthless bee. Since that day I have had some thoughts about the affair, and the conclusion I am inclined to come to is, that the occupant of the cell was too old when set apart for a queen; and were it allowed to hatch in the ordinary way, and live, it would become a *laying worker*. Now, I am sure, Mr. Editor, if my conclusion is erroneous, some of the readers of the Bee Journal will soon expose it.—But as my purpose is to give you an account of an hour among my bees, I must proceed to the other part of it.

Having then taken a spoonful of warm sweets, I opened one of my miniature hives which had an Italian young queen about a week old. I poured the sweets on the top of the frames, closed the hive, and took my seat opposite the entrance, so as to get a good sight of the queen, as she would leave on her hymeneal excursion. The day was calm and bright. The drones were numerous flying through the air; and as the

hive was a short distance from the rest, there were but few bees around it, so that every thing was promising a good view of the queen. I had no doubt but she would appear, for I find that to excite the bees with warm sweets will invariably bring out the queen, if she be of the right age and the day favorable. In two minutes after giving the sweets she appeared, large and bright. Having taken a good view of her hive, she was soon out of sight, but soon returned and entered her hive, without much notice being taken of her by the bees at the entrance. In ten minutes she reappears, and now stays away a long time. She is out twenty minutes; yes twenty-five. And now my expectation is at its height. She must soon arrive now, or not at all. Twenty-seven minutes are now past, since she left the box. At last she comes, *pursued by a drone*. He is gaining rapidly on her. She is for entering her hive, but he is before her. Round and round the box they go; but the queen gets again to the entrance. In she goes, with ocular evidence that she had already been fertilized. The drone would also have entered, had it not been that he was met by two or three workers at the entrance, which disputed his right to that hive. But the queen now complained most piteously inside. The hive was opened at once, and I saw the queen held fast on the bottom. Without a moment's delay the fumigator was got, and freely applied to the parricides—for what else can I call them. This compelled them to let go. The queen now ascended the comb, and the hive was closed. But in a moment she came out, flying, and whirling around the box, and after many attempts to enter again, she succeeded, in spite of her vicious subjects. But she was no sooner in, than out she came again, on the wing, for precious life, pursued by the parricides. On entering the third time, she was soon caught, and held fast, till liberated again with smoke. I then caged her, and as I was anxious to test her purity, I introduced her to her own subjects in the evening, as if she had been a strange queen; and in two or three days she had lots of eggs.

Now, Mr. Editor, during this most interesting hour among my bees, I flatter myself with the thought of having learned something. But as I feel my communication already too long, I can only give you the result of some thoughts, without any comment, which are as follows:—

1st. That a very large queen cell may not produce a large queen, nor any queen.

2d. That a queen, on her return, after being fertilized, may be destroyed by her own bees.

3d. That a *laying worker* is produced as described above.

4th. That a queen may pair more than once with a drone. I have not the shadow of a doubt but the queen described in this communication would have done, were it not that she frustrated her pursuer's attempt by entering her hive. What I now feel sorry for is, that I did not close the entrance, so as to see what is seldom seen.

J. ANDERSON.

Tiverton, Canada, Sept. 11, 1871.

[For the American Bee Journal.]

Extracted Honey.

This being the first season that extracted honey has been sold in this part of Maryland, I was very anxious that mine should be put in such shape as to establish a reputation, and secure me a good market in future, when I should have more of it to dispose of.

As soon as I extracted thirty pounds, it was put in a tin can, set in a vessel of boiling water, and kept at boiling heat for twenty minutes. This not only drives off all the moisture, which would have evaporated, if the honey had been left in the hive until sealed, but causes any impurities, such as pieces of wax, &c., which may be in the honey, to rise to the surface, when they can be skimmed off—thus making it perfectly clear; but also expels all noxious substances. It is then poured into self-sealing glass jars, and fastened up while hot.

The first dealer to whom I showed the honey asked me if I would "guarantee it not to candy or ferment." I told him I was very certain it would not do either while sealed up, but was not so certain about it if left open. To test the matter, I left two jars of it open, in a kitchen, all the summer, and the honey is as good now as it was when taken from the hive.

I think heating the honey is very important, and that it fully pays for the trouble, as the combs can be emptied as fast as the honey is stored, without waiting for it to be sealed; thus saving much valuable time to the bees in the height of the season, and much trouble to yourself in not having to uncup the combs. The honey, after being heated, is about the consistency of thick molasses, and beautifully clear.

I have known several instances of persons eating this honey with impunity, who could not taste ordinary new honey without being made sick by it. One of these persons was my assistant in preparing the honey. She had never in her life been able to eat new honey, and now she not only ate of this twice a day, but mixed it with water and drank it, when she was heated and tired, without its having the slightest bad effect upon her.

That it is very popular and sells readily, may be judged from the fact that I have, up to this time, sold over a hundred and thirty-five (135) dollars worth of it, at about twenty cents per pound, from the seven hives on which I used the extractor, as stated in the Journal for August, and usually in the hot weather it is impossible to sell honey at all in this neighborhood. I have not the least fear of overstocking the market with this honey, as it will pay well at fifteen cents per pound, and every one who has used it wants more of it. Besides, it can be used profitably in making most excellent vinegar—which will serve to regulate prices.

DANIEL M. WORTHINGTON.

St. Denis, Md., Sept. 12, 1871.

Until the fifteenth century honey was used instead of sugar.

[For the American Bee Journal.]

Poisonous Honey.

One morning, just before the close of his daily visit to the patients of a hospital of which he was the chief physician, a professor of surgery, accompanied by his pupils, was called to a man who had just been brought to the hospital.

The sick man appeared to be about fifty years old; his bleary eyes and repulsive features showed the marks of a vulgar and debauched life. He was suffering from an abscess in the throat. That abscess, large as my fist, and pressing on his windpipe, interrupted breathing, and suffocation was imminent.

"Messieurs," said the doctor to his pupils, "if immediate relief were not given to this sufferer, the air would in a few minutes cease to reach the lungs, and he must die. Fortunately it is in our power to save him."

While speaking, the doctor had drawn a dissecting knife from his truss, and directing two interns to hold the patient firmly, he made a deep cut in the abscess. Then bending himself over the sufferer, with his fingers he parted the edges of the wound, applied his lips to the opening, and drew out by suction and spat out two mouthfuls of violet colored pus.

When, after this act of self devotion, the doctor received from the hands of an attendant a glass of vinegar and water, to rinse his mouth, the eyes of his pupils were suffused with tears of admiration.

That physician, so devoted to his art and to his patients, was (or is, for I hope he is yet living) Doctor RICORD, Professor of Surgery in the University of Paris. His practice, at the time, was worth fifty thousand dollars a year.

"Our business sometimes demands true acts of energy," said the doctor, turning to his pupils. "I trust that in a similar emergency each one of you will remember this example and not suffer his courage to fail. In such case you will feel that the happiness resulting from duty accomplished, is far greater than the act itself. Such an operation involves no danger. The virus of the pus, as well as the venom of animals, has no power to affect the mouth or the organs of nutrition. You may without danger suck the stings of bees and the bites of vipers or rattlesnakes."

I beg all, especially my fair readers, to excuse me for having presented before them a picture apparently so repulsive. I hope for their pardon, in view of the greatness of the admirable act.

This story, narrated to me by a friend of mine, a student of medicine, who witnessed the scene, was recalled to my memory by perusing an article of Mr. Langstroth's, on bee poison, in the American Bee Journal for April last, page 221.

Doubtless Dr. Ricord, less acquainted with bees than Mr. Langstroth, was less competent to speak of the effects of bee poison; and certainly that venom, if put on the tongue, causes headache in some cases, as I have myself experienced. Yet I cannot agree with Mr. Langstroth, when he says that is to the poison contained in the

honey that its influence on the stomachs of certain persons is attributable.

Mr. Langstroth says that the bee poison dries on the honey, and a few lines further on, that it is very volatile. A thing volatile does not dry, it evaporates.

But why attribute to the bee poison the cholice experienced by certain persons, after eating honey? I cannot drink milk without suffering from cholice. The *leather soup*, as the coffee milk is named by the *Société Impériale et Centrale d'Agriculture of France*,* is for me a powerful purgative. Raw fruits, or such as are not perfectly ripe, do not suit me, yet I can eat them, without ill results, if cooked. But by cooking honey loses its delicacy.

I did, however, discover a way to enjoy all these good things without suffering. It is by beginning with a little at first, and eating a little more the next day—being careful not to eat between my meals. After some days, my stomach having become accustomed to them, I can eat them freely, though in moderation. To say that my stomach has become accustomed to them, does not express precisely my understanding of the acquired possibility of eating with impunity what at first was injurious. Everybody knows that soap (itself made of soda) is better than soda for the removal of grease spots from garments. It is because it contains itself some portion of grease. The stomach acts in a similar manner. The gastric juice has to dissolve the food. The first time that such food as honey or milk is presented and put in contact with it, the gastric juice does not possess the elementary constituents necessary to enable it to perform the work. But on the morrow, the blood, constituted in part of the honey or milk, or whatever else, eaten and digested the day before, brings to the stomach and supplies the gastric juice with a portion of the essential elements needed, and the food, now better digested, passes without painful sensations. I have many times experienced this in myself, and observed it in the case of many others also.

CH. DADANT.

Hamilton, Ills., Aug. 7, 1871.

* See Report of the Department of Agriculture for 1869, page 634.

[For the American Bee Journal.]

Hives and Honey.

I am again seated, pen in hand, with the intention of boring the readers of the Journal with an effusion on the subject of honey bees. So many of the fraternity add a little information to every page of the Journal, just as the bee adds drop after drop to the store of honey in the hive, that it makes others anxious to contribute a little of their experience, though it may be only a mite.

It seems to be the fashion at present to describe hives, and charge a fee for describing, according to one's eminence in apianian knowledge. Friend Gallup charges one dollar, thus putting himself down at 100 per cent., as at par.

We sometimes think his opinions upon bee-culture much above par; but we will not question his modest decision, and shall hereafter class him as par Gallup.

While reading the many descriptions of hives, one is reminded of the proverb, that "there is but one real good woman in the whole world, and every married man thinks he has that one best, blessed, adorable creature." So it is with hives; every beekeeper has the very best hive. Many want side stagers, and a few don't. Some want side openers, and others would banish them to Tophet. Now I use a *three side* opener, and like it. It contains two sets of frames, one above the other. The upper set I can remove without opening the sides. By opening the sides, I can remove the lower frames, without disturbing the upper ones. The rear opens, and is devised to contain twelve four pound boxes, or a series of small frames. The sides can be removed, and cases containing either large or small frames or boxes can be applied. The hive has a removable cap, and an adjustable bottom-board. These are the general features. Should I give a full architectural description and charge for it according to my eminence, I would fix the price at about five cents—for I feel myself away down below par Gallup, almost at the foot of the ladder. The name of this hive is "*The Star-spangled, Universal, Trio-side-opening, Apis Mellifica Casket.*"

My experience during the past honey season, confirms me in the use of *small* frames. They may not be so convenient to ship to a distance as boxes, but for local sales they can't be beat. I find that if you appear before a customer with a box for which he will have to pay from three to five dollars, he will often look at the amount several times and finally put the money in his pocket, refusing to buy. Whereas, if you present a neat frame for about fifty cents, he will buy every few days, and spend three times three dollars, for honey in this shape. It is much like selling candy. If the retail dealer was obliged to sell it by the box of several pounds' weight, his sales would be few, while the sale of stick by stick is rapid and profitable. We must study to popularize honey in the comb, for extracted honey will always be looked upon with suspicion, for *it will be adulterated*. It is almost impossible to get pure extracted honey in any of our cities. While there are honorable dealers, there are also those so dishonorable as to palm off a poor quality of doctored molasses for honey; and a small quantity of adulterated honey gives a bad name to a large amount of pure honey. If extracted honey is to become an everyday article of use, its price must be put down cheaper than any article by which it is adulterated. We will then, and not until then have the pure honey on sale in our largest cities.

Extracted honey would be profitable at a very low price, for it is great gain to keep the breeding chamber emptied of honey. Extracted honey also bids fair to have a powerful rival in the new rising industry of *grape sugar*. Honey as we all know comes under this head, and grape sugar can be made from shavings, rags, sawdust, and any kind of cellulose; but the cheapest material

is corn and grain. From the pure starch obtained from any kind of cellulose, a syrup can be made that resembles honey so closely that few can detect the difference; and when this industry becomes thoroughly established, it will take the lead, and extracted honey will have to fall into line upon some uniform price *per gallon*. But, Mr. Editor, I have already written too much, and will close. SCIENTIFIC.

Hartford, N. Y., Sept. 7, 1871.

[For the American Bee Journal.]

Patents, and Patenting Inventions.

So much has been and is being said against patented inventions, especially "Patent Bee Hives," that it would almost seem to be the only side of the question that would bear discussion.

After waiting a long time to see something in the Journal from some patentee, in defence of their motives and rights, we have thought that something might be said in their favor.

It has been written in the Bee Journal, and elsewhere, that patent hives are a curse to bee-keeping. Let us see if this is true. In this case we must not be partial; we must include all. Now, shall we go back to the old box hive, and say it is the best? But some will say "the Langstroth is good." So it is, but it is patented, and therefore should come under the rule that "patent hives are a curse to beekeeping."

To Mr. Langstroth we are indebted for the principle of the movable comb, as introduced in this country; and to him we should give the honor and pecuniarily respect his claims. With these considerations, improvements should be allowed. Mr. Langstroth drew his ideas from those before him, and others should have the same right. How would it have been with other inventions, had no improvements been allowed? Savary with his steam engine, Fitch with his steamboat, Howe with his sewing machine, Morse with the telegraph, and so on through the list?

It is a law of the universe that there is no stand-still. We are either improving or going back to rise again; and perfection may be considered as the plant that is matured, as then decay is its destiny. If the proverb is allowed, that "necessity is the mother of invention," then we must allow that without necessity there would be no invention. Suppose some inventions are counterfeit, and do more harm than good, should we say that all are worthless? The best test of a genuine thing are the numerous attempts to counterfeit it. An article of no value is not worth counterfeiting.

But says some one, if you have anything of importance, you should give it to the world, or you are not a public benefactor. A public benefactor is an exception, not the rule. Besides an invention given to the world, of whatever importance in itself, would not be introduced without more labor, time, and money spent in introducing them when a person is pecuniarily interested in its introduction; and this selfish world would not accept anything so unnatural

to its views. "Necessity is the mother of invention." That would not imply that an inventor should help the world before he helps himself.

Where is there a man who is continually crying—"down with patent rights! They are humbugs," &c., who is willing to advertise something of value to the world for nothing? On the contrary, where has there been a discovery of great value, but has had the greatest number of opposers?

If these men that are crying humbug would consume half as much time in instructing the illiterate beekeeper in the science of bee-keeping, there would be less complaint of being deceived, and we should move on. But these fault-finders do not write or talk to show the way. They have other reasons. Some of their talk is like the gas that arises from fermentation in consequence of having been soured. Hence the effervescence; or some cry "sour grapes!" Some have an unusual protuberance of the cranium in this direction, and do not think of anything else to say.

A correspondent writing under the caption of "My Patent Bee Hive," in the Journal for May, says—"what intelligent beekeeper can read the heading of this article without feelings of indignation and disgust? Of disgust, when he thinks of the legion of foolish and worse than useless devices, &c. Of indignation, when he remembers, how those devices are combined with valuable qualities," &c. Further on, he says—"Inventions grow." That would not imply that they grow by jumping from one great invention to another, leaving out all the minor ones. If we reason by analogy, little by little is the law of nature, and with inventions it holds good.

Every invention, however small and seemingly worthless, helps to build up and bring out greater ones. They may seem worthless, but some part may serve as an index finger to point to something of real value. Therefore inventions will continue to be made so long as the end justifies the means. Ideas are not new, although we call them so. It is their combinations that makes them new to us.

The attentive readers of our American Bee Journal are not likely to be humbugged by patent-right men, especially if its contributors write to instruct rather than to find fault. We do not remember ever reading any of Mr. Langstroth's writings wherein his text was "down with humbug," &c. But for fear to be thought ours is, we will stop.

Enclosed find two dollars for the Journal, for we use it in our business, and expect to do so while we are a being (Bee-ing).

SESEAYE.

Pollen, in botany, is the farina or fertilizing powder communicated by the anthers of flowers to the pistils.

Wax dolls never indulge in laughter. They belong to the *cereous* family.

[For the American Bee Journal.]

Patent Hive Deceivers, &c.

MR. EDITOR:—As I have not noticed anything in the Journal from Southwestern Missouri, I will write you a few lines.

My occupation calls me from home occasionally, and in the last few days, only a few miles from here, I was much surprised to find many of my acquaintances paying for a movable comb bee hive and right, when they were really getting nothing deeded to them except a moth trap and a bee-feeding box underneath the hive—which I consider not worth a hill of beans. I asked a friend, who had just bought one of these gull-traps and right, to show me his hive; which he was quite ready to do. "Here," said he, "is the Improved Movable Hive. I can take out the combs; divide the bees and swarm them, as I please; raise queens; shake out the moth-worm, &c. Down underneath here is the moth-trap, to catch the miller; put some water in there, and he will get drowned. Back here, too, is the drawer to set in food and water, all so good and nice. But I think I will only use the upper part, and not bother myself making the lower apartment. The movable frames are what I wanted."

I said, will you show me your deed? He soon produced it, and, sure enough, it was just as I expected to find. I told him I saw that the patent vendor had only deeded to him the right to make and use the moth trap and bee feeder; but had not given him the right to make and use the only valuable thing there was about the hive. Said he—"Then, it seems, I have got only what I do not care for, and am liable to pay some one else for the frames." It is even so, said I; your deed gives you no right to use the frames—they belong to the original patentee or his assignee. The price this man paid for a farm right was ten (10) dollars; for hive and right, fifteen (15) dollars. I could hear of the patent vendor selling ten or a dozen rights and hives in that neighborhood, amounting to from one hundred and fifty (150) to one hundred and eighty (180) dollars; all sacrificed by these people for not being posted. Had each of them taken the American Bee Journal, it is not likely that any one of them would have paid ten dollars for a moth trap and bee-feeder.

Readers, let us try to circulate the Journal among beekeepers generally. Some of you may say that two dollars a year is too much for the paper. But, remember, it is devoted exclusively to your interest, and not sustained by money obtained by selling devices that are of no use, or pretending to convey rights not embraced in the patent. Instead of helping to deceive and defraud you, it is striving to keep you from being imposed upon and robbed. No man can keep bees with success and profit without the Journal; and the man who cannot afford to pay two dollars a year for a paper that monthly brings him valuable information from all parts of the country, had better not spend his time with bees.

I consider the July number of the present volume worth a year's subscription to any bee-

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keeper. The new volume has started as an advance on the old ones, and we feel assured that if supported as it ought to be, it will continue to improve from month to month, and from year to year. Beekeepers want a paper that they can, in all respects, rely upon; that has no interest in misleading any; and is ready to stand up fearlessly for the right on all occasions. Such a paper we have in the AMERICAN BEE JOURNAL. Let us all join in giving it an adequate and cheering support. Sustain it well, and we shall save money by being kept from the clutches of harpies. There are many also just beginning to feel an interest in bee-culture, since it has been shown to be a profitable business when managed with ordinary care and intelligence. All these should have the Journal to pioneer them on their way, and give them the rich experience of practical men who have been long and successfully engaged in this fascinating pursuit.

Let me add a few words more, of local interest. Beekeeping here is progressing of late. Formerly it was managed on the old-fogy principles. We have not much natural pasturage here for bees, and the country is still so new that artificial pasturage is not yet plenty; but bees are doing tolerably well at present, everything considered.

E. LISTON.

Virgil City, Mo., Aug. 29, 1871.

[For the American Bee Journal.]

Bee Season's Operations.

MR. EDITOR:—The past was a remarkably early season. I set out my bees on the 10th of February, calculating that I should have to return them, as I still expected cold weather. In this I was disappointed, as the bees continued flying daily, as if it were summer. This caused them to use up their stores very fast, and I judged that, at the rate of consumption going on, they would soon run out of stores. I resorted to feeding, and gave them a considerable quantity of syrup to save them from perishing—purchasing for this purpose three hundred pounds of sugar. Some old beekeepers around remarked on this, that beekeeping did not pay; enjoying a laugh at me for feeding my bees. I let them laugh, as I felt confident there was a good time coming for me and my bees. Well, swarming time came on, and the old fellows kept looking for swarms, but were doomed to disappointment; while I was getting honey by the tub, and making plenty of artificial swarms. Then, as an old negro said—"they begun to laugh out of de odder side of their moufs!"

We shall be more careful hereafter, and always keep honey enough in reserve to give each colony ten pounds if necessary. They will be sure to pay it back richly. No honey worth mentioning could be obtained by the bees till the 10th of May. Though the trees bloomed in profusion the bees were kept from visiting them by constant high winds from the south. After the 10th, they gathered sufficient for their own use; though the hives were not near as populous at the end of May as they had been at the beginning of April. Still, by a little attention prop-

erly directed, they were kept in good condition for summer's operations. We pitched the honey out Novice fashion, when the season fully opened. Any person who would secure the most honey from his pure Italians, will use the honey extractor. This we find to be of vital importance with the Italians; but in an apiary of five or six hundred stocks, several extractors would be needed, with suitable assistants to operate them, otherwise even Novice would be kept on the run.

I notice in the August Journal an article from the pen of N. Cameron, of Kansas, pitching into some of our old bee-writers pretty strong for a man from the wild country, and charging the veteran Gallup with seeking to impose some device on the public. If Gallup does not deserve a place in the Journal and allowed to have his say, I think no one does. All novices in beekeeping that have been reading Gallup's articles, should hold him up as their teacher. It is plain enough to me why Gallup made the statement he did, since I have studied the matter over. I have come to the conclusion that he adopted that plan merely as an excuse for not writing awhile. Readers have become so attached to his writing that they expect him to lose too much time from his farm. He is right in the course he takes, for like some of our queen breeders, he ought to look out a little for his own interest.

J. N. WALTER.

Winchester, Iowa.

[For the American Bee Journal.]

Comments on the Past Season.

MR. EDITOR:—Here we are again with our bees in September, and we shall have to confess that ours have not done as well as we expected they would in the spring. Still, we are not going to complain, when we look at some of our neighbors, whose bees have not done as well as our own.

The month of March was very warm here, and in the latter part of it the bees brought in a considerable quantity of pollen. But April was cold and wet, and the colonies rather lost than gained in population; and when the weather became warm my hives were crammed with brood. By the way, spring feeding is a "big thing." It tells for the next three months, and in fact for the whole season. We did not have much fruit bloom here, and as we had got up our bees to the swarming pitch, some colonies nearly ran ashore for honey, having so many young bees to feed. But we carried them through safe till clover came into bloom, and then got out our machine and took out two hundred and thirty (230) pounds of nice honey, when a drouth came on and stopped our work in that line.

Our bees were ready to swarm early, and were through with that before our neighbors had any drones flying. I did not let them swarm as much as some do, for I was fearful of a bad season; and in this I think I hit the nail on the head. At the present time I have twenty-four colonies in good shape for wintering. Buckwheat has yielded a good lot of honey; the hives

are well filled; and in some cases the bees are filling boxes; so that I can safely say I shall get three hundred pounds of honey in all—which is better than I have done before. But if the season had been as good as the previous one, I could, with the facilities I now have, just as easily have got one thousand pounds.

The last was a very bad winter here for bees. Some beekeepers lost as high as sixty colonies. I lost only two, one of which was queenless, and the other failed from carelessness. In the fall my hives were crammed full of honey, with hardly any empty comb. As I had no extractor then, I had to take out three or four combs from each hive, and mass the bees on a few combs, and that is what saved them. Beekeepers who did not use this precaution have told me that their bees died, leaving their hives full of honey—an occurrence which they could not understand or explain.

I am sorry to say that I have had one case of foul-brood in my apiary; though I think it is cured now. I extracted all the honey and removed the queen, letting all the brood hatch that would. I then filled the cells with a solution of hyposulphite of soda; let it stand in over night; then emptied it, and took the combs over to the Thread Factory and immersed them a few hours in a solution of chloride of lime; then rinsed them, threw out the water, and gave them back to the bees in a clean hive. They have raised a number of sets of brood since, and I think are all right now. For one, I am willing to give Dr. Abbe all praise for the remedy, and thank him besides; for it is a great discovery if it holds foul-brood in check. I think, as a class, beekeepers are not always willing to give each other due credit for advances or improvements made in bee-culture; but are rather too apt to go on the principle of "it's big I and little u."

Some correspondents appear to think that Gallup is rather rough, because he wants a dollar for the description of his hive. I do not. If he has made a valuable improvement on his hive, he should have his pay as well as any one else. A man may work a lifetime for the public and get no thanks for it. If the grumblers will look over the Journal for the last five years, and read Gallup's articles, they will find things worth much more than a dollar if practised, made known by him with no reward except the pleasure enjoyed from helping onward the inexperienced who were groping their way in the dark. When the hash on which he is now at work is cooked, it is likely we shall want some of it on our plate.

I have read the September number of the Journal, and am much pleased with it. We learn something new from the Journal every month, and expect to do so while we live to read it. Cannot something be done, Mr. Editor, to have it come semi-monthly? Can't you manage to take a vote and see if the beekeepers won't go in for it and pay four dollars a year instead of two? It is well worth the money, being the best paper in the country on bees. This all will admit, and the beekeepers ought to see to it that it can be published more frequently, for the advantage and benefit would be on their side.

I am glad to learn that there are beekeepers in

other sections of the country, who are doing better in the business this year, than we are here in the New England States. Seasons and the weather vary, and our turn too will probably come round in due course. Novice had better look well after his laurels, or Miss Katie will take them.

G. H. BASSETT.

North Bennington, Vt., Sept. 8, 1871.

[For the American Bee Journal.]

Why the Bees Did Not Swarm!

MR. EDITOR:—I see from the correspondence of the Journal, that in nearly all the States there was very little swarming among the bees this season.

I think I can give the reason or probable cause of this. The natural instinct of the queens induces them to commence laying about the time New Year comes, or most generally from the first to the tenth or fifteenth of January. They will usually lay a small circle of eggs in two or three of the middle combs; in February they enlarge the circles, and still further enlarge them in March, adding some more combs to those already containing brood. They proceed thus progressively, till in April and May they have their combs mostly filled up, and when the last or fifth large circle is ready to hatch, the colony is ready for swarming, in a natural season.

This season the weather having been warm in February and March, the bees had their three larger batches ready for swarming about the last of April and first of May. Most of the Italians swarmed about that time, or during the latter part of May and beginning of June. The queens then rested from their labors, and honey being plenty, the workers filled up nearly all the brood combs with honey, and very few afterswarms came off. But the season advanced too fast for the black bees, whose natural swarming time is from the latter part of May to the middle of June, the brood cells were rapidly filled with honey, leaving no empty ones for the accommodation of the queen, and hence very few swarms came from the black colonies.

I opened strong hives to get bees to make nuclei, on the 19th of April. They had their queen cells run out, with larvae in them, and we had swarms in April this season. I made artificial swarms on the 10th of April to start queen cells, and they did well. One of the old colonies that I removed to a new stand, after having taken out one-third of its combs and bees, and all the old workers returning to the old stand, still made me sixty pounds of surplus honey; and I sold the hive after the honey season was over for fifteen dollars.

I do not let many swarms come off naturally. I make artificial swarms by controlling my colonies and directing their labors to honey gathering, instead of encouraging their swarming propensities. When I see any of my colonies that are likely to swarm, I open their hive and take out two frames containing hatching brood, with all the adhering bees, leaving the queen in the old hive. I set these combs in a new hive, and

go to two or three other colonies and take two combs from each of them, setting them in the new hive, with the frames first removed. Do this in the evening, or, if you separate in the morning, always set them in a dark cellar till late in the evening, and then let them out. When you go to unite the frames always blow smoke on them for a short time, and the bees will unite with distressing each other.

I can take out a frame or two of brood once in awhile, and thereby control the swarming in almost all cases, and have my bees store honey during the whole of the honey season. And by taking out the frames from the center of the hive, the bees are not stopped from storing honey, but are rather incited to labor the harder.

When you let a hive swarm naturally you nearly destroy the honey storing of the colony for that season. But by controlling swarming you will never stop the storing of honey, checking it very little indeed, while you add one-fourth or one-third to the number of your stock, and have all good strong colonies in the fall. By taking their old brood combs from the old hives at that season of the year, the colony will in almost all cases build new worker combs; and by getting the new in the center of the hives, your old stocks will be much healthier and more vigorous. Always notice if you have a last year's swarm equally strong with an old colony in the spring, that the former will generally be first to swarm.

I see by the Journal that the ladies are taking some interest in the cultivation of bees. When you see the ladies take hold of a business like this, they generally do it in the right way and succeed well.

I have got up a new hive, and am almost afraid to say anything about it in the Journal, for I see in the August number that friend Gallup, having slipped in a few words concerning his hive in the previous number, gets a rap on the knuckles on every side. Now, if he had got it patented, made a great blow about it, got out a boasting advertisement and a flaming show bill, and charged five or ten dollars for a right and a description, it would all have gone off rapidly, like hot buckwheat cakes in the fall, spread with plenty of butter and honey.

ALFRED CHAPMAN.

New Cumberland, West Va., Aug. 21, 1871.

[For the American Bee Journal.]

Facts on Queen Raising.

MR. EDITOR:—I see in the July number of the Journal Mr. J. L. McLean, of Richmond, Ohio, undertakes to philosophize away the longevity and fertility of artificial queens, on the ground that the length of life in "a being is in the ratio of the time intervening between birth and puberty."

We understand from the article the birth of the bee to be fixed at the period of the hatching of the egg and not when it emerges from the cell.

I will here pause, and inquire whether or not Mr. McL. is not laboring under a mistake, when he takes the position, that the period intervening

between birth and puberty is shorter in the case of an artificial queen, than in that of a natural one?

1. The birth of the bee is fixed at the hatching of the egg.

3. All larvæ, whether in worker or royal cells, are fed on the same kind of food during the first five days.

3. On condition that the royal cell is built the third day after birth, so that the queen emerges from the cell in ten or eleven days from the time the cell is started, is the period between birth and puberty of the queen shortened? I think not. She only lived and was fed in a worker cell as she would have lived and been fed in a royal cell for the first three days; but the length of time from birth to puberty is the same.

The dimensions of the cell do not always determine the size of the queen reared therein; but is indicative of the amount of food placed in the cell.

When queens are reared under the impulse of natural swarming, the largest cells are filled one half inch in the bottom with food, and the cell lengthened out to give the queen the proper amount of room; and after the cell is vacated a large proportion of the food is left behind unconsumed. But the food consumed and not that which is left, has to do with the life of the queen.

Do artificial queens get a sufficient amount of food? Under most circumstances they do. This is demonstrated in the size, color, health, and their early fertility. When manipulation is correct, such queens are as large, as bright colored, go upon their bridal trip as early, and commence depositing eggs as soon after copulation as natural queens. Does the circumstance of the mother depositing the egg in the royal cell and its hatching there, give the embryo queen an advantage over the one worker deposited and hatched in a worker cell, on condition that it is nursed for a queen from birth? *I think not.* No food is put in the worker or royal cell until the egg hatches, and then the same kind is given for five days, though not always, I think, the same in quantity. Hence the importance of having the larva fed in view of a queen from birth, but not from the depositing of the egg—as this always, both in a worker and royal cell, remains without food till birth.

A. SALISBURY.

Camargo, Ill.

It is yet an unsettled point whether the queen ever deposits an egg in a royal cell. We put the question to Mr. Dzierzon some years ago, and his reply was that though he had opened and inspected thousands of hives in the breeding season, and watched queens when laying in worker and in drone cells, he had never seen one laying in a royal cell. He called the attention of beekeepers to the matter, in the *Bienenzeitung*, and asked whether any one had seen the queen in the act of laying in such cells; but no one has ever answered affirmatively. Has any American beekeeper seen it?—Our own impression is that she does so, but only when the mouth of the cell has been properly prepared for the purpose by the workers.—[Ed.]

[For the American Bee Journal.]

Queen Cells and their Contents.

MR. EDITOR :—To-day I had a large swarm of bees come off from one of my hives. They were clustering on the fence, when I discovered them. The honey season being over, I determined to open the hive they came from, destroy the young queens in their cells, and return the swarm to the parent hive. On opening the hive, it was very full of brood, mostly sealed over. The first two queen cells I cut out contained each a dead larva. The third cell had its cap nearly cut round by the young queen, ready to emerge. I removed the cap, and placed the young queen in a cage for future use, if needed. The fourth cell contained a dead *worker bee* dwarfed in size, as you will find on examination. The fifth cell—the most singular, contained a *worker bee* and a *queen*, both dead. These had evidently been dead several days, for on attempting to remove the queen (as I thought,) I pulled the head off the worker. By opening the cell carefully and removing them together, you will find their legs entwined together as they died. The sixth cell contained a *live well developed worker bee*, with her head to the base of the cell. I killed her and returned her to the cell, as you will find her. The seventh cell contained a live queen pupæ, well developed.

The cells as you will see, are of usual size and position, and in outward appearance were like ordinary queen cells. I have never heard of two bees being hatched in one cell, and what is more striking, the one a worker and the other a queen. Can you account for it?

The cells evidently had never been disturbed or opened from the time the bees had sealed them up, until I opened them with a pair of slender point tweezers that I carry in my pocket to remove stings, &c. The cocoon or silk covering inside was perfect, until I opened them.

Last spring the parent stock was a three-quarter blood black bee. They swarmed on the 19th of May. On the 20th I removed the queen cells and introduced an unimpregnated Italian queen (taken from a full hive after it was sealed, and hatched in a nucleus). She was laying on the 27th of May and the hive has done well ever since. Her progeny has a slight dash of black blood.

I have packed the cells in a tin box, and think they will go safely by mail. Cell marked No. 1 contains the dead worker; No. 2, the queen and worker; No. 3, the workers alive when opened. They were a curiosity to me, and as such I forward them to you—hoping they will arrive safely.

A. L. BROWN.

London, Ohio, July 29, 1871.

We received the box in good condition, and found the contents of the cells as described. We have often read of workers found in queen cells, but never before of a worker and a queen.—[Ed.]

No person ever got stung by hornets who kept away from where they were. It is so with bad habits.

[For the American Bee Journal.]

"Natural Hardy Queens."

The American people is held by all other nations, as an intelligent people, endowed with sound, practical ideas. Indeed, all classes of citizens in the United States are favored with a sound, clear mind, unbefogged with foolish notions—except one class of society. I mean the *beekeepers*! Since the late promulgation of the modern theory of improved bee-culture, the minds of all those who had "bee on the brain," have been thoroughly disturbed. The unreasonable theory advanced is that by the method of artificial queen raising, bees can be multiplied *ad libitum* if not *ad infinitum*, without at all consulting those insects as to their own proper disposition or wishes. All the feeble-minded of the fraternity of beekeepers—that is the great majority of those who own bees and like to attend to them, have accepted that theory as indisputably true; and all, unconscious of the fallacy of such a system, claim, in spite of common sense and contradicting evidence, that queens thus artificially raised are as good as, or even better than those produced by natural swarming; and continue to incur the risk of their own ruin and the ruin of the race of bees, "by acting against reason, nature and common sense."

Among the feeble-minded fellows I can cite one who, after getting forty-six colonies by that bad method, imagined that his cistern was full of honey gathered by his bees, and that by turning a crank he had filled, one after another, all the pots in his kitchen, and then the boilers of his neighbors, and afterward, some thousands of glass jars with water, labelled—"WHITE CLOVER HONEY, from A. I. Root, Medina, Ohio." Astounding hallucination!

Another of the same set, who inhabits Wenhams (I do not give his name, because I fear to turn his innoxious mania into furious folly), has imagined to raise queens for sale. So much deranged is he on this point, that he never perceived that of every five queens which he tries to raise, three fly away on their wedding trip and are lost, and the remaining two are either drone laying, or lay eggs which do not hatch, or at least are a year in maturing. And what is the more wonderful, that the man not only seems content with his business, but that all his customers—equally purblind—are content also and in the perverted craniums imagine that the queens they receive, though nearly or quite dead, are thoroughly prolific, filling their hives with brood and honey which exist only in their owner's imagination.

Such, during the six or eight years past, has been the mental state of the American beekeepers at large. Fortunately Providence, who always has eyes open in order to produce the saviour of the nation just at the right moment (Ex. Napoleon III. for France), has prepared in the West, a man whose mission it is to recall the beekeepers from vain imaginings to common sense. The predestined man is Mr. John M. Price. His first attempt at prophesying having been without results, he retired under his tent. But the

feu sacre has anew taken possession of him, and we can hope that this time his crusade against a lunacy so wonderful, will be crowned with success.

Plaisanterie apart. Mr. Price, are you then riveted to your theory? Unfortunately, after giving us the means of refutation in your own contradictory writings, you furnish, in the American Bee Journal for August, a new weapon against your arguments.

In a preceding article on the same subject, I have proved that, by your bad method of dividing your colonies to the utmost, *making ten from one*, you can obtain only poor and unprolific queens. Now you say that some queens artificially raised, are one year old before reaching maturity. Then, as some of your queens become good after awhile, may it not be that the progeny of the one I sent you was such?

I too have had queens which matured late; but never when they were put in good strong colonies. I can give you a good instance of delayed maturity. One of my neighbors, Mr. McC. sold me last winter a second swarm of 1869. The queen of that swarm was so poor a layer, that her progeny did not fill her hive in all 1870, and in February 1871, the colony was near starving. I transferred the combs in March, adding a comb of honey and one of brood, and at the end of May I killed that queen with regret (she was black), for she had become wonderfully prolific. Thus the queen had been nearly two years in becoming *mature* as you would say; or before being placed in circumstances indispensable for the development of her fecundity, as I understand the matter,

Believe my experience; quit your system of spoiling your colonies by such dividing as you have narrated in the American Bee Journal of 1868, 1869 and 1870; use exclusively strong colonies to raise queen cells; keep the bees with honey liberally given, if the weather is unfavorable for gathering. Then you will no more complain of the small number of cells started; nor of the poor quality of the queens raised; if you put those young queens in populous and well supplied colonies.

I hope that, after one season of such trials, you will acknowledge with me that the swarming fever has no more value for raising good queens, than a fifth wheel would have for your wagon.

CH. DADANT.

Hamilton, Ill., Aug. 9, 1871.

[For the American Bee Journal.]

Crippled Bees. Queen Killing. Honey Plant.

MR. EDITOR:—I have also something to tell my brothers in bee-culture, though as I am afraid they all know so much more of such matters than I do, I feel a little hesitation in writing, since possibly no one will learn much from so poor a hand.

What I wish to state is that one day I noticed some of my bees dragging others out of their hive, though I felt confident they were neither robbers nor young unfledged bees. Why this

was done, I could not tell. They did not sting their victims, as they would sting robbers, but merely dragged them to the edge of the alighting board, and gave them a kick as it were, by way of hint to leave the premises.

On close examination, however, I found there was something wrong with the bees thus treated. I killed a few of them, and found their feet and legs enveloped in filmy fibres about the thickness of a hair and from an eighth to a quarter of an inch long, and in some of them their lower mandible was affected in like manner. They could not crawl up any perpendicular object, nor help to gather honey or pollen, and as in the bee household loafers are not tolerated, spunging on the labors of others, they were summarily ejected like drones out of season—the motto of the industrious insect seeming to be—“*root hog, or die!*” Ever ready for self-defence, they still have no compassion for the wounded or crippled, though unwilling to commit murder in cold blood and turning them out to wander away and get lost. I cannot account for this occurrence. It is not the effect of moth web. I am acquainted with that. Nor is it anything hanging to their legs, but appears to be some kind of growth, at least so it seems to me. Perhaps it is nothing new to your readers, but it is to me. Who can explain it?

In the August number, Mr. J. Anderson gives an account of a nice queen being destroyed by her own children, because she was out of the hive a few minutes. That circumstance comes so near one I witnessed myself that I will give an account of it, letting it pass for what it is worth. Last year, in September or October, I sent to Adam Grimm for two queens. Both arrived safe, and I introduced them according to the printed directions accompanying them. They were accepted by the bees, and this spring the hives were well filled with yellow jackets. One day I wished to look at them, so I got some rotten wood or rags (I forget which), and smoked them a little. I then raised one of the combs outside out of the hive, where I saw a bunch of bees about the size of a walnut, on the bottom board. The thought struck me immediately that they had assailed my queen. I took my knife and easily parted them, and behold two scoundrels crawled away with their stings fast in the body of my nice queen. I felt bad, I assure you, all that day, and did not sleep much the following night, thinking of the mishap, and wondering how it came about. Did I strip her off the comb when I raised it up, that she fell in their midst, or how came it that they attacked and killed their mother? I set her on another frame after she was stung, but she was instantly attacked again. I closed up the hive and let them have their own way. Next day, at noon, I caught the rioters dragging her out. In nine days there were fourteen queen cells in the hive, ready to hatch.

I have one thing more which may be of interest to the bee keeping fraternity, who appear to be on the look-out for some plant that will bloom after the white clover fails and last till buckwheat comes in. I think I have found such a plant. Further experiments will show its

value. I am almost afraid to tell Novice, lest he should get drowned in honey; but then again, it would be so sweet a death that perhaps he would not care much, as we must all once die. Well, what do you think it is? Open your eyes, ears, and mouths, and listen! It is what we here call tame peppermint. One of my near neighbors has a small patch of it, about six feet by twelve, in his yard. I pass the place three times a day in going to my meals, and observed the plant in bloom long ago. They tell me it blooms until frost. The bees are there busily engaged every time I pass, if the weather allows them to be out. I have an idea that the honey gathered from this plant must have a very pleasant taste and aromatic flavor. This patch was raised by setting out a few stalks for tea, and in two years' time it has spread to what it is. I think it prefers a moist soil, but not too wet. Let those who have fence corners and waste spots try it.

Bees did not swarm much here in June, though some did tolerably well in that way; but August swarms I see and hear of almost every day. Your patience is no doubt running low, so I will close this my first epistle, signing myself

A MILLER by profession,
but not a MOTH MILLER.

Duncan's Mills, Aug. 10, 1871.

[For the American Bee Journal.]

About Fertilizing Queen Bees.

MR. EDITOR:—The September number of the Journal has made its appearance, and its contents well digested. Like others we are not satisfied until we have read all it contains. The more we read and the more we learn from it about the little pets, the more we wish to know.

We have been very successful this season with our bees. We have raised several queens, and experienced considerable trouble in getting them properly fertilized. With some we had success, but with others not. Some were fertilized in confinement, and some in the open air. We failed to a great extent with our new fertilizing cage. It would not work as well as expected. Like others before us, we "failed," and have come to the conclusion that this mode of procuring fertilization will never work as was desired, though Mr. N. C. Mitchell claims that he has brought it to a focus. I think nature has provided a way, by which the bee may propagate its species, and that the only way with success.

IN AND IN BREEDING.

In last month's Journal, Mr. T. Hulman gives us his views on in and in breeding. I must beg leave to differ with him to a certain extent. He refers us to the buffalo and other herds, and speaks of the Jersey cow as coming from a small island, where the stock has been bred in and in for centuries, and still they exist distinct and pure.

But we do not call this in and in breeding, if we understand the matter right. But if we take a Jersey cow and a pure male from the same herd, and raise calves from these two, and

when they arrive at maturity, we breed to the same male as before, and so on, and do not change, what will be the result? Why the stock will finally run out; in other words, the stock will degenerate until there will not be a trace left of them. Although the Jersey cattle come from a small island, they were not allowed to breed in this manner, but are bred carefully not sister to brother, but to distant relatives. So with the Italian bee. If you take a queen and drones from her, and allow her offspring (queen) to mate and be fertilized by her drone progeny, my candid belief is that they will naturally degenerate and finally cease to exist as Italians—that is, if you keep on breeding in this manner for three or four generations.

But some one will say, they are all Italians, and how can you keep them from breeding in and in when they have free access to the open air? The answer is, the queens meet drones from another mother and of a different family; and by so doing keep up the race to the standard mark of its required qualities. As I have bred queens and had them fertilized by drones of the same mother, I found after breeding them in this way for several generations, they would gradually lose their good qualities, and finally become dwarfed to a certain extent.

Why do queen breeders, if you buy more than one queen from them, state to you that "this one is not akin to the rest I have sent you?" Mr. T. speaks of the human family as not being injured by intermarriage (that is the way I understand him). Now I do not believe in relations marrying at all; it does to some extent injure their offspring. But this does not come up to the point, as I view in and in breeding. Suppose he takes the case of a brother and sister marrying. Undoubtedly he will find the case plain enough that their race (or offspring) are deficient in more or less of the required elements of the human family. I would guarantee that if this were the case, the human race would so deteriorate or degenerate that there would not be a sound or perfect man or woman on the globe.

In breeding queens, or anything else of the kind, I always select from some other family, the males from which I wish to breed; and by so doing I keep up the required qualities of whatever stock I am breeding or raising. I will admit that queens reared in a swarming hive, are somewhat larger; but as to their being any better or longer lived, I am unable to determine.

I do not write this, Mr. Editor, thinking that the gentleman is wrong in his views, but he gave his belief, and I give mine—a privilege which each has a perfect right to enjoy.

Beekeeping is waking up in these parts. I intend to talk nothing but Italians hereafter to those engaged in it. The Italian queens prove to be more prolific than the black queens are.

Tell Mr. Gallup that we intend to hold on to the almighty dollars, whether to buy lumber to make one of his hives, or not.

We are expecting to enjoy a splendid time at the next meeting of our association at Manchester, and will report the proceedings of the meeting at an early date, for publication.

In concluding my tedious communication, I will say that I am satisfied with this year's profits, but expect to do better in another.

T. H. B. WOODY.

Pleasant Valley, Mo., Sept. 11, 1871.

[For the American Bee Journal.]

The Test of Purity Again.

I am much pleased with a part of G. M. Doolittle's article on purity of Italian queens. I have experience to corroborate his. More than two years ago I put a few of the facts to the beekeeping world, through the American Bee Journal, but I presume they were not then considered worthy of attention. I had a *most beautiful* Italian queen (which was superseded only a month since) that produced all extra nice three-banded workers of deep color. Yet half of her drones were bluish-black, and many of her queens as black as a crow. And what was not less strange is, that her worker grandchildren mostly became glossy black in their old age. I think Mr. D. has suggested the proper test at last. Why not be governed in breeding bees by the same rules as in other stock? That is, breed on and on in the same line till the sixteenth or twentieth generation, and till "like produces like." The fact is, workers are simply imperfect bees, and their qualities—be they better or worse—cannot be taken as a test. Now, gentlemen bee-breeders, let us have a pedigree. Tell us, and *prove* to us, how far back your queen bees have produced their like.

Nor does it matter whether the Italian bee "is itself a hybrid" or not. The best of our improved cattle, hogs, and other stock, were originally crossed. If it is a *fact* that the Italian bee is superior, we want the breed "established;" and this can be done only by breeding forward long enough or tracing back far enough. The unimportant matter that bees originally came from Italy, or that they are of the "latest importation" is not enough for a good stock man.

But I am not satisfied that Mr. D. has settled the matter of queens mating with two drones. A friend of mine whose word is current with me in everything else, and who does a good deal of experimenting with bees, assures me he has repeatedly had a queen mate with two drones on two different days, and that "it" killed both drones. If other female animals "mate" with a plurality of males, why may not queen bees also? The authors and writers are not the only ones who are at work on the bee question. After three years' experience, I am still of the opinion that *much* of the *great difference* between black bees, Italians, and hybrids, is imaginary. For the sake of truth, science, and common sense, let us have less exaggeration.

J. W. GREENE.

Chillicothe, Mo., July 18, 1871.

From Christmas to Candlemas, a careful bee-master should consider any worker bee in a healthy hive worth a three-pence.—HÆFFLER.

[For the American Bee Journal.]

Two Queens in a Hive—Another Singular Occurrence.

MR. EDITOR:—I am really only a beginner in bee-culture, though I have had some bees for sixteen years, and purchased a Langstroth book and hive from Mr. Otis, at the St. Louis Fair in 1860, and have taken five volumes of your Journal. Still, in all this time, I paid very little attention to my bees until the fall of 1869, when I got some Italian queens about the first of October. In the year 1870 the bees did not do well in this neighborhood, so that I might say I commenced last spring. I was absent from home on the 3d and 4th of June, and when I came back my son said that seven swarms of bees had issued while I was away, and that one of them was the largest he had ever seen. They had all been hived in box hives, as I had but few section hives, and my son did not know how to manage them. On the 6th of June the big swarm came out again and settled on a bunch of lilac bushes, right at the ground, and I had quite a job getting them off. But I succeeded at last, put them in one of Adair's section hives, and they went to work with a will. On the fourth day after, I put on two honey boxes of nine sections each, and some of the bees went to work in each of them the same night. In less than two weeks they had the brood chamber about full, and three combs and some small pieces in each box; when the honey failed from the prevalent drouth, and they did little more than live, up to July 25th, when I concluded to take the queen and put her in a box hive that had become queenless. I was expecting to receive some Italian queens in a few days, and intended to give one to this hive. I carried the chamber to the cellar, hunted out the queen, cut off one wing, caged her, stuck her down through the top of the box hive, and left her there twenty-four hours, when I pulled out the stopper to let her pass out of the cage whenever she pleased.

I did not get the Italian queens until the 5th of August, making eleven days; so I expected to find plenty of sealed queen-cells in the hive from which the queen was removed. I carried it to the cellar (as honey was still scarce, and robbers very plenty), and commenced at the front to look for the cells, clearing the combs of bees as I did so. I found one cell near the center of the third section, which had evidently been torn open. That was all I found till I came to the center of the chamber, when I took off the back, and there was a queen right on the face of the first comb. I caught and crushed her, supposing she was a young one just hatched—as eleven and five made the sixteen days, if the bees had taken a larva five days old to raise one. But, to my surprise, when I came to brush the bees off the comb, I found the cells contained young larvae and plenty of eggs not yet hatched. Not another queen cell could be found in the chamber, so that I concluded the old queen had played the same game as did Mr. Argo's runaway. Next evening I thought I would drive the bees out of the old box hive and see if there was any queen there;

but they would not move, either with rapping on the hive, nor with smoke blown in at the entrance. They would come up to the top of the comb, and run around the edges of the hive very briskly, but would not go up into the box; so I concluded I would next day transfer them to a section hive from which a small swarm had deserted, and then give them a queen from another hive. I smoked them a very little, to put in an Italian queen, and carried them to the cellar; but still they would not drive. Then I pried off one side of the hive and cut out the combs (smoking the bees back out of my way), and when I came to the third sheet, behold there was a circle of capped worker cells, larvae of all sizes, and eggs! Now I did not know what to think, but transferred what comb there was that was worth anything, put the chamber in the case, and shook the bees out on a sheet in front, and *there was the queen with only one wing*, sure enough. Now, gentlemen, there must have been two queens in that hive for a number of days, with no sign of quarrelling.

And now, Mr. Editor, I think I have spun my yarn pretty long for the first time, and suppose I had better stop.

C. T. SMITH.

Trenton, Ill., Aug. 14, 1871.

[For the American Bee Journal.]

Retrospective Inquiries.


MR. EDITOR:—In renewing my subscription, allow me to say that I could not well do without the Journal. Though young in the fascinating study of apiculture, I have learned to know that the more knowledge we have of the *nature* and habits of the bee the greater will be our success. My experience has not been *all honey*, but my failures have all been good lessons. With this view of the matter, drawbacks should only stimulate us to try and do better next time. Some of my friends think me crazy on this subject, but a man (or a woman either) must be enthusiastic to succeed well in any undertaking.

As the Journal is a vehicle for thought and experience, I will, with your leave, put a few questions to some of your correspondents.

I will then first address myself to QUERIST. On page 55, vol. 5, Mr. Seay takes the ground that "the first and highest law of nature in insects is self-preservation in caring for offspring. The honey bee seems to be endowed with this instinct for the purpose of preserving brood in the hive." On page 83 of the same volume, you, Mr. Querist, call in question the foregoing statement, by asking—"If the preservation of offspring is the strongest instinct that governs the honey bee, then why does she remove unsealed larvae from the cells, to make room for a rich honey harvest?" On page 76, vol. 6, Mr. Seay makes some very strong points on his side of the question, which have not yet been met by you or any one else. Now, are we to conclude, from your long silence, that you have given up the point? If not, please give us some *facts* supporting your view of the subject. For, if the

honey bee differs from all other insects in this respect (as she no doubt does in others), then the fact ought to be established, so that it will add to our knowledge of the wonderful little insect.

J. M. PRICE.—There appears to be some difference between you and Mr. Langstroth, regarding queen raising. No doubt your experience in this direction has caused you to come to the conclusion that the *best* queens can *only* be raised by a colony having the swarming impulse. But Mr. Langstroth, in accordance with his observations, says: "I have for years been in the habit of raising my queens in stocks kept in full heart by liberal feeding or otherwise, and have not found any appreciable difference between those thus raised and those raised by bees when preparing to swarm." Now, as the line must be drawn somewhere, do you consider *all queens artificial*, except those raised by a colony under the swarming impulse? Please give us a reason, if you can, *why* queens are better when raised in this condition than in any other. Is it in the nature of the *egg*, *quantity* or *quality* of food given to the larvae, or what?

NOVICE, take my . I would like one good hearty shake of yours. I thank you for all the information you have given me. That article in the August number is worth more than "a dollar." Your experience is always welcome. I have, this summer, been much exercised on the subject of *straight* and *worker* comb. I have not succeeded as well as I would like, for the bees would be a little stubborn. Now, as I want to be "master of the situation," and you are an *old novice*, please give us your *best* method, so as to obtain the *best* result.

EVERYBODY (Gallup excepted).—Last fall my bees did not stop breeding till late, and used up the most of their bee-bread. This spring being wet and cold, they could not work much on rye-flour, and by the time they could gather pollen some of the stocks were very weak. Now, as good coffee-sugar is a good substitute for honey, I would like to know whether bee-bread has ever been analyzed and a substance found, single or combined, that would be a good substitute for bee-bread, to be fed when required. All information will be thankfully received by

QUERIST No. 2.

[For the American Bee Journal.]

Bee Notes from Southern Indiana.

SEVERE DROUTH.

We have just passed through the severest drouth that has been experienced in this section for many years. For about two months it did not rain enough to lay the dust. The ground had not been thoroughly wet since May. Almost every honey-producing flower, with all other vegetation, was literally "dried up." The red clover and the white had ceased to bloom, and almost to live. The corn tassels were bleached and wilted. The buckwheat—our main dependence for honey at this season of the year—had not moisture enough to grow stalks or leaves,

much less blossoms. In short, the bee-pasturage was almost entirely cut off.

RAIN.

But this long drouth was brought to a close last night by a copious "water fall." It rained for more than twelve hours, almost without intermission. The parched and thirsty ground is now thoroughly moistened, and in a few days we may look for a revival of vegetable life. I have about eight acres of buckwheat, which I think will soon furnish good pasturage for my seventy stocks. I did expect to get considerable surplus honey during the buckwheat season, but now shall let my bees have all they can make from this time till frost. They have been, during all this dry weather, and are still, breeding profusely. This has made a heavy drain on their stores. The honey in a few of the stocks had got so low that I began to feed them. But I think they will be able to take care of themselves in a few days. If they fail in this, however, they shall not suffer; they have done too much for me this season, to be driven into winter quarters with scanty stores.

BEE FEED.

I have been feeding with a very simple and cheap food. I bought a few gallons of sorghum molasses at forty cents a gallon. In this I put water and honey in the proportion of one quart of water and one pint of honey to one gallon of molasses. This mixture I boiled until it was of the consistency of thin molasses. When cooled, I poured it into cards of empty comb, about one quart to the hive. It was wonderful how soon, after these cards were returned to the hives, the bees would lick up this syrup and deposit it in other and more convenient parts of the hives.

TWO QUEENS IN ONE COLONY.

I have recently had an interesting case of two queens in one hive. In looking over one of my stocks, to which I had last spring given a young queen, I accidentally discovered two fertile queens, each quietly passing over the combs as if unconscious of the presence of the other. The younger had been there several weeks, as her brood was then hatching. Of this I was certain, as the brood of the older was pure Italian, while that of the younger was badly marked.

I removed the older queen to another hive, that had been without a queen for some time. At the same time I gave the hive to which I removed this queen, a card of unsealed brood. The queen immediately began to deposit eggs in the combs. The workers, although they had acknowledged her as their sovereign, commenced the construction of queen cells. These cells were sealed over, and one of them hatched out, in the presence of the old queen, she not attempting to disturb them. The young queen, as soon as she had emerged from the cell, destroyed the other cells, but did not do or say aught to the old queen, nor the old one to her. I tried very hard to get up a fight between them, driving them together and catching one and putting on the other; but they did not seem to recognize one another as of the royal

blood. In due time the young queen became fertile. She continued laying in the presence of the old one, frequently on the same card with her, for two weeks or more, until I removed the old queen. In attempting to introduce this old queen to another hive, I lost her, else her biography might perhaps be rendered still more interesting by other remarkable incidents.

What could there have been about this queen that kept her from interfering with other queens, and that restrained them from disturbing her? There was nothing peculiar in her appearance, except that her body was rather short. She was quite prolific, and her progeny were well marked. The workers, however, seemed to apprehend that she was an extraordinary *bee-ing*, for she was always, or at least whenever I saw her, surrounded by a crowd of admiring and apparently amazed subjects, their heads turned toward her, and ever and anon gently touching her body with their antennæ, as if to say: "What *are* you, any how?"

FREAK OF HOSTILITY.

I have also had another peculiar queen case. While examining one of my full stocks, I found a number of queen cells started. Supposing that the bees were proposing to swarm, and to prevent the queen from getting away, I took her up in my fingers and clipped her wings. When I returned her to the top of the frames the workers gathered upon her, just as they would on a strange queen, and in a few moments had her closely confined in a dense cluster. It was with difficulty that I could release her. I removed her to another hive. Why the bees should reject her, I could not conceive. She was a young queen, not over two months old, and was tolerably prolific. At the time she was depositing drone eggs.

FERTILIZATION OF QUEENS.

For the past month I have had much difficulty in getting my young queens fertilized; and this while I have a good many young drones. The dry, hot weather has seemed to prevent the queens and drones from desiring to mate. I have one queen now over a month old, that has just begun to lay. I did not experience this trouble early in the season.

INTRODUCING QUEENS.

I have recently given the plan suggested in a late number of the American Bee Journal, of hatching queens in cages, a pretty thorough test. I put about twenty sealed cells in as many wire cages, two inches long and one and a half inches in diameter. These I suspended in a strong stock that was, at the time, destitute of a queen. The young queens hatched very well, but unless I removed them within a few hours afterwards, they invariably died. The workers refused to feed them while thus caged. I then tried putting in the cages pieces of sponge saturated in honey, from which I thought the young queens could feed themselves. But this was attended with the same result as before—the queens died. Out of the twenty I did not save more than five or six.

I have also tried Mr. Langstroth's plan of in-

roducing young queens, just hatched, into full stocks. In almost every instance the workers deliberately dragged them out, as if of too little importance to be allowed hive room. From some of these stocks I had removed the old queens just before attempting to introduce the young ones. Others had been queenless for several days. I have seldom had any success in my efforts to introduce unfertile queens.

A FERTILE WORKER.

My neighbor apiarist, Mr. P. D. Boyer, has had quite a siege with a "fertile worker," in one of his hives. This stock had been destitute of a queen for some time, when he gave them some sealed queen cells. In a little while afterwards he found these cells torn out and an abundance of eggs scattered through the combs, in both worker and drone cells. Supposing that another queen had by some means got into the hive, he made a thorough search, several times repeated, for her, but searched in vain. He then, suspecting the presence of a fertile worker, looked time and again for her, but he could see no difference in the appearance of the workers. Eggs continued to be scattered profusely through the combs, sometimes as many as five in one cell. The bees built what looked like queen cells over the brood of this *layer*, but they failed to hatch. After several efforts he succeeded in getting them to receive a fertile queen, and then all went on right. The brood from this *animal*, whatever it was, hatched out *drones*. Those that were in drone cells looked just like other drones. *Quære*. Have such drones the power to fertilize queens?

M. C. HESTER.

Charlestown, Ind., Aug. 25, 1871.

[For the American Bee Journal.]

Another Beginner in Iowa.

MR. EDITOR:—In reading your valuable paper, I see now and then a word from a beginner, and being in that plight of misery myself, I thought I would let your readers know that there is still another new hand, trying to gain a livelihood by the way of stings and honey.

I am yet a young man, just starting in life, a resident of Jefferson, in Greene county. My attention was first called to the "little busy bee" by W. H. Furman, Esq., of Cedar Rapids, who is well-known throughout the State, as a first-class apiarian and breeder of Italian queens. He attracted my attention to that branch of industry, while exhibiting at our County Fair, last fall, and of him I purchased my first stand of bees, in the "Langstroth Hive," also Langstroth's work on "*the Hive and Honey Bee*," and then subscribed for your valuable Bee Journal—neither of which I would now do without.

Last spring I bought four more stands, all Italians; thus making my start with five colonies. I concluded to commence right, by placing myself under the instruction of a practical bee-man; and am spending the season in the apiary of Mr. Furman, at Cedar Rapids. I have found that, for a novice, there is something to learn. My success thus far has been a doubling of my

stock, two hundred and three (203) pounds of honey from the lower part of the hive, taken by the use of the slinger, and ninety (90) pounds of box honey. Reports from home say that the bees are still storing honey rapidly from some source.

Why do not some of the writers tell us more that would be of practical benefit, with less of "I," or "my hive," &c.? For instance, their method of preventing robbing, which I find to be one of the greatest difficulties at this time. A little advice in this line, I think, would be gratefully received by beginners generally.*

EDWIN A. KING.

Cedar Rapids, Iowa, Aug. 21, 1871.

* [] The former volumes of the Bee Journal contain many articles and suggestions on preventing and checking robbery by the bees.

[For the American Bee Journal]

Introducing Italian Queen Bees.

I have had good success by the following method:

Take for a bottom a board six inches square; for ends two one inch strips; for sides, glass five by six inches; top two and a quarter by six inches, inside the space inclosed by the glass. Cut most of it out. One large hole covered with wire cloth; a smaller hole covered with a paste-board card made to slide, the end projecting outside for handle. Put a frame with comb inside, with queen. Set the box over the bees; withdraw the slide a little, and let three or four bees up. After awhile let up a few more, and repeat the operation till the box is full of bees. In two days more, withdraw the slide and the queen will go down. The honey boards I use favor this method. They are made of plasterer's laths dressed to a quarter of an inch; the ends halved, and fastened with 2½ oz. tacks. The middle piece that runs lengthwise, is one inch thick and two inches wide, nailed on the top, which makes six holes.



Under the long middle piece tack straps of tin to project three-fourths of an inch into the square spaces; make a separate corner for each hole, to remove when the boxes are put on.

J. WINFIELD.

Hubbard, Ohio, Aug. 3, 1871.

BEES.—The Paris (Ky.) *Mercury* says: Farmers tell us that this is a prolific year for humblebees—they have never seen as many "in their born days." In numerous instances farmers have stopped plowing in consequence, the bees being troublesome to the plowman as well as to his team.

THE AMERICAN BEE JOURNAL.

Washington, October, 1871.

We learn with sincere regret that our friend and correspondent, Novice, was prevented by physical disability from furnishing us with his customary monthly contribution—sending us only a brief note instead. We trust that relaxation and exercise will soon restore to him health and vigor.

Mr. Langstroth, also, as we are informed, is again prostrated by the return of the malady from which he has so often, long, and grievously suffered. May he, too, speedily recover and be permanently restored to the enjoyment of health.

The London "*Journal of Horticulture*," of August 3d, announces the death of Mr. T. W. Woodbury, known to most of our readers as "The Devonshire Beekeeper." He died on the 26th of July, and by his death England lost one of its most intelligent and thoroughly trained beekeepers.

The Marquis of Balsamo-Grivelli, distinguished as one of the most enthusiastic and spirited bee-keepers of Italy, died at Milan, on the 8th of April, after a short but painful illness, aged 71 years. He was indefatigable and highly successful in his exertions for the revival of bee-culture in his native country, enlisting the active co-operation of a large number of patriotic citizens in founding the "*Central Association for the encouragement of Bee-culture in Italy*," and was a regular contributor to the Italian Bee Journal.

The "*Bienenzeitung*" also notices the death of the Rev. Joseph Stern, a veteran German beekeeper, and a writer on bee-culture. He died at Weissenkirchen on the Danube, in Lower Austria, in the 74th year of his age. His numerous contributions to the "*Bienenzeitung*," in the course of the past twenty-five years, were the result of long experience and close observation in the management of his apiary; and we always turned to them eagerly, sure to find his remarks and reflections as instructive as they were attractive.

Our last number contained a communication from Dr. Hamlin, of Edgefield Junction, Tennessee, respecting queen bees laying non-hatching eggs; and in this number we have another on the same subject from Mr. Jerrard of Levant, Me.

It was, till within a few years, the accepted doctrine that queen bees lay no addle eggs, or eggs that do not hatch. But recent observations have shown that this is an error. In September, 1870, a queen bee, whose eggs were thus defective, was sent to Professor Von Siebold, of Munich, with a request that he would dissect and examine her, and report the result. He found her spermatheca well filled, and the spermatozoa therein still living, or in motion—exhibiting

all the usual appearances under the microscope. The ovaries contained egg-germs and eggs in all stages of development, with corpuscular evidence that she was a laying queen, in all respects normally well formed. But, from anything perceptible, no opinion could be formed why her eggs did not hatch. If there had been any obstruction in the neck of the spermatheca, preventing the fertilization of the eggs, these should nevertheless have hatched, producing drones, and causing the queen to be or become a drone-breeder. But as this was not the case, the non-hatching may have resulted from the omission by the workers of some important part of their duty, if it be true that proper treatment of the eggs by the brood-nurses is essentially requisite for their development. Or rather, as the Professor seems incline to assume, the cause may ultimately be traced to some defect in the physical organization of the queen, preventing the due development of the egg-germs or eggs in her ovaries. But for a satisfactory solution of this question, Prof. Siebold thinks we may yet have to wait long, as the means of making such profound examinations of the processes of egg formation and development, at present available, are wholly inadequate to the purpose.

☞ In reply to an inquiry from Canada, we say that those eggs of a queen bee, which are impregnated when passing the mouth of the spermatheca, on their way down the oviduct, produce workers (*undeveloped females*) or queens (*fully developed females*); and those eggs which pass down the oviduct without receiving impregnation from the spermatheca, produce drones or males. Usually, fertilized queens commence depositing by laying worker eggs; the subsequent laying of drone eggs being governed by season or circumstance. Occasionally, indeed, young queens do, for a short time, lay drone eggs when beginning to oviposit, and later commence and continue laying worker eggs. But this is a very rare occurrence, which Prof. Von Siebold accounts for satisfactorily. When a queen once begins to lay worker eggs, there is no subsequent regular alternation in the deposit of worker and drone eggs. She will lay either kind, as the season or the wants of the colony prompt her to do, or till her supply of spermatozoa is exhausted. Then she becomes a drone egg layer exclusively, and continues such till her career is ended.

☞ One of our correspondents, this month, appears to doubt whether the so-called "Taylor frame," which once for a season, like the Cardiff giant, served for a gull-trap, was not invented and used in England, before that of Mr. Langstroth was patented in this country. We will give the reader the facts in the case, though that which never had an existence can hardly be said to have a history. Properly speaking, what is designated as the *Taylor frame*, never existed

anywhere, save in the fertile brain of Martin Metcalfe, who figured so prominently in opposition to the extension of the Langstroth patent, on which occasion he tried inconsistently to palm it on the credulity of beekeepers as an *old* thing, while claiming to be himself the inventor of movable frames. We presume our correspondent got his idea of the alleged invention, and his impression of its priority, from a certain pamphlet published by Metcalfe, while he was yet flourishing in his own placard and biography, like another notorious infringer, as "a distinguished apiarian." On page 28 of that pamphlet, an effort is disingenuously made by its maladroit compiler, to create the impression that the frame he figured and presented to notice, and which was so obviously an imitation of one of the forms of the Langstroth original, was described and figured in Taylor's book, published in England, in 1838—thus making it antedate the Langstroth patent. But the truth is *no such frame, NOR FRAME OF ANY KIND, is mentioned, described, or figured in that edition of Taylor's book, nor in any one of the four subsequent editions thereof.* It first came into view in the EDITION OF 1860—nearly eight years after Mr. Langstroth's patent was obtained! And it is not even then claimed by Taylor, as his frame. He says, explicitly, that it is a modification by some one else, as an improvement on the Bevan bar hive; but from the tenor of his statement, it is manifest that he had seen and copied from Mr. Langstroth's book (second edition, 1857); for, in a note on page 205, he quotes *verbatim* from it, and refers to Mr. L. as "an American author." It will thus be seen that the insinuations and reckless assertions made by Metcalfe, respecting the alleged Taylor frame, and the impression fraudulently sought to be made by him, that it was described and figured in 1838, or anterior to the date of the Langstroth patent, are wholly unwarranted—having no foundation in truth.

A correspondent of the *Prairie Farmer*, who appears to be a good and successful practical beekeeper, falls, we think, in some instances, in accuracy of observation. Thus he says:—"In one case I put a queen cell in a clean comb, and the next morning she was on the combs, and the next morning she had filled a frame six inches square nearly full of eggs, which hatched out worker brood." We are too well aware of the frequency of abnormal occurrences among bees, to accept everything that "the books tell us," as undeviatingly correct under all circumstances, or at all seasons; but in the above statement there are physiological difficulties involved which make it evident that the writer must have been deceived. Conceding that the young queen may have left her hive in quest of drones on the day she was hatched, (which is an extreme improbability, though still possible), and that she was then fertilized, the fact that time is required for the formation

and development of the egg-germs in the ovarian tubes, and for their passage thence through the oviduct, renders it further exceedingly improbable, not to say actually impossible, that hatchable worker eggs could have been laid by her so early in life as on the day after she was hatched. Prof. Leuckart, of Giessen, found that in a royal pupæ, nearly ready to emerge from the cell, many of which he has dissected, no egg-germs were ever present: and Dr. Dönhoff, who dissected a young queen forty-eight hours after fertilization, found egg-germs only in the ovisacs of the ovarian tubes. It seems thus exceedingly unlikely, or rather physically impossible, that a queen could lay hatchable eggs within twenty-four hours after leaving her cell. We admit, freely, that bees sometimes indulge in unaccountable freaks; but they are never such as involve a palpable disregard of natural laws, or grossly violate the process of physical development; and hence, we infer that, in this instance of alleged precociousness, there must have been unconsciously an error of observation.

CORRESPONDENCE OF THE BEE JOURNAL.

CORNERSVILLE, TENN., Aug. 17.—I have kept bees all my life, and do not know how I did so long without the Journal. I like it better the longer I take it. My bees did very well till the first of June; since then, till now, they have done nothing, though I hope they will yet fill up sufficient to winter. The linden bloom failed here this year. There was bloom on hardly one tree in ten or fifteen. I have had only five natural swarms this year, out of seventy box hives. I intended to transfer to Langstroth hives, but when I saw that the linden bloom would do no good, I concluded to wait until next spring.—J. F. LOVE.

PELEE ISLAND, CANADA, Aug. 13, 1871.—I see from the correspondence of the Journal that the yield of honey in different localities, varies very much the same season; as also does the yield in the same locality in different seasons. Although our stocks may be managed upon the most approved system, it seems that the yield of honey is as much dependent upon the different atmospheric changes of the season, as a crop of wheat or grapes, which are very uncertain in most localities. My bees wintered well on their summer stands; found blossoms and pollen as soon as it was warm enough for them to fly; bred rapidly and made early preparations for swarming; but unfavorable weather caused them to destroy queen cells and postpone it till the last of May and the first of June. A drouth of six weeks cut short their supplies, and they did not gather any until the first of July, when the basswood came in blossom; and continued until the 10th. In the meantime we had rain and white clover blossomed most profusely, but not a bee noticed it, and they remained idle for ten or twelve days. When the clover was nearly dried up, they commenced working pretty freely upon what was left, but were hardly able to supply their daily consumption. Now (Aug. 12), they begin to gather pretty freely from some weeds in woods and marshes, a dark colored honey. All the white honey has been taken from them to give room for this.—T. SMITH.

OTISCO VALLEY, N. Y., Aug. 21.—This has been a very good season here for bees. A large increase in colonies, and a full average yield of honey. From

forty-eight colonies wintered, I have increased my stock to eighty-two. All are in splendid condition to go into winter quarters. I have also taken twenty-eight hundred pounds of very nice box honey. This I consider very good for a novice in bee-culture.—H. ROOT.

CAMPBELL'S CROSS, CANADA, Aug. 23, 1871.—The more I read the American Bee Journal the better I like it. With such close observing men as Novice, Gallup, and others whose writings I might mention, beekeeping is being brought from, I might say a business of uncertainty and loss, to one of profit and pleasure. We call this one of the poor seasons in this part of Canada. Owing to the dryness of the weather, the flowers soon failed, and the consequence is there is not much box honey. Later in the season we had some honey dews that have made the hives in good condition for wintering. With the use of the honey machine and the aid of the Italian bees, I have secured a large quantity of pure honey during the short honey season, that I would otherwise not have had.—H. LIPSETT.

DANVERS, MASS., Aug. 25.—Bees have not done much in this section, as far as surplus honey is concerned. They came out in good condition in the spring. My seventeen colonies swarmed some twelve or fifteen times, and we have got about one hundred or one hundred and twenty-five pounds of honey. I read of big stories in the Journal, but would rather read of more small stories. Those who succeed best are those most apt to tell of their success, and those who do not succeed do not like to tell their stories among the big stories, for fear of being laughed at. My bees are in good condition, only one colony wanting feeding out of seventeen. I doubled up my swarms and put them back. I sold three of them, and one left for the woods.—E. E. PORTER.

ELM GROVE, WEST VA., Aug. 25.—Having taken a great interest in the reports contained in the Journal from various parts of the country, of the season, I would say that the yield of honey has been very good in this section. Bees commenced to gather pollen from the elms about the middle of March. The fruit trees were full of bloom, and bloomed very early, but did not yield much honey. The white clover was in bloom by the 20th of May, but the weather being a little dry, there was not at any time a heavy bloom. There was more rain the latter part of June, which prolonged the season till the middle of July, thus giving the bees a long period in which to store honey. There did not appear to be an excess of honey at any time, but a good regular supply throughout the season. The weather was bright, and not excessively hot, so that the bees could work all the time. We have all the forage necessary for a good honey supply. A few of my hives yielded ninety pounds of surplus box honey, and also some extracted. First swarms issued on the 9th of May, but they were easily prevented from swarming by a little attention. There is a fine prospect of fall pasturage, and it is just the beginning of the fall season here at this time.—J. BAIRD.

LAWRENCE, KANSAS, Aug. 26.—The prospects are good for a yield of honey this season. August has been a good month for honey, and if we have a few showers the season will last till frost, which generally comes about the middle of October.—N. CAMERON.

FENN'S MILLS, MICH., Aug. 28.—I wintered my bees in clamps, as Mr. Schultz in Langstroth's book, with the exception that I gave them more ventilation and did not cover the outside with straw. Found but few dead bees when I took them out, but the combs and doors were somewhat soiled, and some of the

combs a little mouldy. Very little honey consumed. The weather was very warm in March, but cold in April and the fore part of May. One swarm came out and left the 28th of May; filled their hives properly, but did not go to work in boxes by the second week in June, and lay still till into July. Then they commenced swarming, without stopping to fill the boxes, except a few of the most backward ones, which did well in boxes and did not swarm. Such populous swarms I never saw before. They have all filled their hives, and some of the first filled several boxes each. I want to see those plates, etc., of comb frames invented previous to the Langstroth patent, so as to be able to distinguish between his and other frames; for it is still a question in my mind if he has invented the Taylor frame, published by Munn about the time Langstroth obtained his patent.—H. HUDSON.

RIPON, WIS., Sept. 3.—In this section of our State the summer has been a strange one. The honey season commenced in June, and for three weeks I could not have wished my bees to do better in honey-making. July 1st the change came; swarming stopped, and bees remained idle up to date. Large prime swarms, coming from June 29th to July 7th, have not made five pounds of honey in the body of the hives, and will have to be fed largely or taken up. The old stocks are very heavy, and in fine condition for winter; and in three weeks' work in June, sixty-six of them filled one hundred and thirty (130) six, eight, and fourteen pound boxes. A long continued drouth is the cause of our losing July and August. We expect nothing from September, for we are as dry as a powder mill, and no prospect of any change.—R. DART.

CONSTANTIA, N. Y., Sept. 4.—My bees have not done well this summer. I got only five new swarms from twenty good strong stocks, and but very little surplus honey. I think the season has been a poor one for bees in this county (Oswego).—W. SHELTON.

POCAHONTAS, MO., Sept. 4.—I enclose two dollars for the seventh volume of the American Bee Journal. I am a farmer, but have made more clear money from the sale of honey this summer than from my wheat crop. Much of my success I owe to the editor and contributors of the Journal.—J. C. WALLACE.

PALMETTO, TENN., Sept. 7.—Bees have done no good in this part of the country this year.—J. F. MONTGOMERY.

GUELPH, CANADA, Sept. 7.—Enclosed please find two dollars, subscription for one year from January 1st, 1871. Send me all the back numbers, and keep me on your list as a constant subscriber.—P. H. GIBBS.

[For the American Bee Journal.]

Introducing Queens.

I promised to report the first case of failure in introducing a queen without caging, where a queenless colony had started queen cells.

Well, I have failed. I have had two queens introduced in that way, killed. All went well enough until the latter part of July, when the drouth cut off the supply of honey. Then, when I made an artificial swarm by removing the hive and setting a hive containing brood but no bees, in its place for the returning bees to occupy; after these old bees had started queen cells, I gave them a queen, and they killed her. I think if there had been a yield of honey at the time, or

if the bees had been younger, I should have succeeded; but I have been headed off so many times by the bees, and in so many ways, that I begin to despair of being sure of anything in bee-culture.

July 11th, I set hive No. 19, containing brood but no bees, in place of No. 20. Three days later, I gave them, without caging, a fertile queen. On the next day I found her imprisoned—one party of the bees fighting for her, and another against her. I then took an *empty* hive, No. 33, put in the queen, leaving room at the entrance for positively only one bee at a time to pass, and set No. 33 in place of No. 19. The result was a dead queen. I then gave No. 33 a frame of brood to start queen cells; and after they had them started, I gave them a crippled queen that I did not care to save, to see what they would do with her. She was promptly imprisoned, and I left her to her fate. A few days later, on going to cut out the queen cells, I found them destroyed and the crippled queen laying eggs.

On the whole, I am inclined to think that I can succeed better in this way than in any other, with the same amount of trouble.

August 1st, I received a queen from Adam Grimm, and desiring to run no risk, I took a plan that I think is *sure*. But "there is many a slip" &c. I bored a two inch auger hole in the bottom of a Langstroth hive; tacked a piece of wire cloth over the hole on the inside of the hive and another piece over it on the outside; took from a second story of another hive a couple of frames containing no brood except such as were ready to gnaw their way out of the cells; put this brood in the empty hive with the hole in the bottom, being sure that not a single bee remained on the comb; then put in my queen with her half dozen attendants, closed up the hive bee-tight and placed it over a full colony, with no intervening honey-board, so that the heat could ascend through the wire cloth to the hatching bees. If this works well, I think I shall try the same plan for making an artificial swarm.

C. C. MILLER.

Marengo, Ills., Aug. 4, 1870.

[For the American Bee Journal.]

A Fertile Queen whose Eggs do not Hatch.

I have a very fine looking Italian queen in one of my hives, that has been laying for a month or more, yet none of her eggs have hatched. She was reared in a full swarm, under the swarming impulse, and is remarkably large and handsome. That she mated with a drone I am sure, having observed the visible signs of connection on her return from her bridal tour.

Is this common? I have reared several hundred queens during the last three years, but never had a case of the kind before to my knowledge.

G. W. P. JERRARD.

Levant, Me., Aug. 10, 1871.

The above was marked for insertion last month, to accompany Dr. Hamlin's communication respecting two similar cases, but was accidentally misplaced.

[For the American Bee Journal.]

Introducing Queens.

MR. EDITOR:—I give below my mode of introducing queens the present season, which if you think worthy of a place in the Journal, please insert.

In introducing queens this season I have proceeded as follows: Removed the old queen, several hours after which I smoked the bees in the hive from which the queen was removed, and also the one from which the queen to be introduced is to be taken, quite thoroughly with tobacco smoke, till some few became giddy. I then took out the frame on which the queen is and held it to the entrance of the hive desired, brushed off a few of the workers, which set up a lively humming; then brushed the queen from the comb and saw her well in the hive. As soon as she was upon the comb, I gave them more smoke.

I found this process very simple, and have thus far succeeded in every instance. At the time honey was very abundant, or about June 13th. Others who have tried this plan under more unfavorable circumstances, would do me a favor by reporting result. I am a little fearful that if the yield of honey was light, this plan might not succeed. Let others give us their experience. I, for one, want more light on the subject.

F. A. SNELL.

Milledgeville, Ills., Aug. 12, 1871.

[For the American Bee Journal.]

A Wax Extractor.

MR. EDITOR:—I have invented a wax extractor, which I will describe without charge, as follows:

Get a piece of fine wire cloth, three feet square. Bend it in the form of a square box. The bottom is made of board, with a hole in it large enough through which to insert the comb, and fitted with a movable wooden cover. Take a large kettle, fill it with water, and put in your wire cloth box containing the combs, loading it with a stone or stones, heavy enough to keep it under water. Boil one hour. Then let it stand till it gets cold. The wax rises to the surface of the water, and can be taken off when cold.

If it is desired to have the wax in one mass or a nice cake, put it in a skillet, remelt it, pour it in a vessel, and let it get cold, and you will have as nice wax as anybody wants.

In the summer this should be done after dark, or you will be annoyed by crowds of bees from the apiary. I boil mine after dark, and let it stand till morning. Then I put it in a small skillet, remelt it, and pour it into cups, leaving it stand till cold.

I hope I have given a sufficiently clear description.

C. E. WIDENER.

New Cumberland, Md., Sept. 2, 1871.